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ABSTRACT

This document presents the San Diego Unified School District's specifications for planning and designing a new middle school. Information on district parameters, a vision plan, curriculum and instruction concepts, community functions, aesthetic and flexibility considerations, and activity areas are included, as well as summaries of space requirements. Primary focus is placed on detailed descriptions of suggested spaces to be included in a middle school. Information for each space includes an area description and information on capacity, activities, space requirements, spatial relationships, furniture and equipment needs, electrical requirements, lighting, and specifications for interior structures. A summary of space requirements is included. (GR)

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ED 457 663

Hoover/Crawford Area Middle School

San Diego Unified School District

Educational Specifications

Final, December, 1993

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Part I

Welcome. You are about to engage in one of the most dynamic activities in education--planning a new middle school. This document reflects the overall district goals, the superintendent's initiatives, the curriculum and instruction guidelines, national education research, state of California reports, and the results of the district's future schools workshop. All reinforce a commitment to developing facilities that embrace middle school concepts based on team teaching methodologies.

This document, Part I, contains a general overview of pertinent issues in planning a new middle school. Part II contains a detailed description of each area to be incorporated into a middle school.

Together, these documents should be viewed as a guide to local planning committees, architects, and district staff. They should be used in conjunction with other district planning guides such as the "District Landscape Design and Site Development Guidelines. Adaptations of the concepts, ideas, and specifications will be required to address the specific needs of each site and to embrace new educational trends as they evolve.

It should be noted, however, that while the spaces outlined in this document are desirable, due to budget constraints, all may not be realized.

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I. Executive Summary

Through ongoing work with district staff, faculty, administrators, parents, community members, architects, and consultants, this educational specifications document has been developed. Its primary purpose is to serve as a guide for the architects in developing schematic design and final working drawings for new middle schools.

The document is comprised of several sections: an introduction, district parameters, visionary plan, curriculum and instruction concepts, community functions, aesthetic and flexibility considerations, and activity areas with a square footage summary.

Part II contains a detailed description of suggested spaces to be included in a middle school from which local site task forces are encouraged to develop their own site-specific documents.

Project Parameters

The middle schools of the San Diego Unified School District should serve 1,200-1,500 students. Eighty-eight square feet per student is the recommended space allotment by the district. For a school with 1,500 students, the total square footage of the school would be 132,000 sq.ft.

Grade configurations at the middle school level include grade 6 through grade 8, grades 7 and 8, and grade 7 through grade 9.

To determine the size of school sites, the district has established a guideline of one acre per 100 students. A school with 1,500 students would require a site of 15 acres. Sites are to be master-planned for future portables to accommodate growth as well.

Visionary Plan

The San Diego Unified School District has developed four goals to guide the district's work and professional staff development. The goals focus on restructuring for excellence in learning outcomes, teaching practices, collaboration, and integration.

The district vision statement centers on cherishing diversity and expecting high performance while including the involvement of all students, staff, and parents as well as community members, businesses, organizations, and local, state, federal government leaders on a multitude of levels.

Curriculum & Instruction

The middle school program is based on a team teaching concept with a focus on a project-based, interdisciplinary curriculum. The suggested specifications have been developed to provide the local sites to implement a variety of instructional approaches, including grade level teaming, school-within-a school as well as more traditional concepts. A major focus of these specifications is to provide the ability to divide a large school into smaller instructional units. Learning how to think and learning subject matter content are not separate processes--they are interdependent. The shift from a skills-based curriculum with teacher as "dispenser of knowledge" to a hands-on, student-centered, experience-based curriculum with teacher as "coach" results in the thinking curriculum.

The San Diego Unified School District is on its way in meeting the challenges posed by "Caught in the Middle," and the middle school learning environments of the district will reflect this student-centered approach. The specifications in this document are tailored to meet the needs of this approach to learning in concert with the needs specific to the San Diego Unified School District.

Community Functions

Since the students attending the new San Diego schools will come from many different cultures and an important focus of these schools is to prepare students to function in a diverse world, one way to address these issues is to celebrate cultural diversity through school facilities and programs.

Community involvement in education and education involvement in the community can take a variety of forms. Based on limitations established for the size of the facility and budget constraints, most of the community uses will need to focus on shared space--space that is used primarily for middle school programs during the school day and community uses during non-school hours.

Collaboration and partnership require greater cooperation in the planning of schools and community facilities. It is important for the school district and the governing agencies to participate collaboratively in the planning and design of schools. The San Diego Unified School District and Board of Education encourage the collaboration between the district and other public, private, and non-profit organizations.

The multi-service center concept incorporates a "one-stop" shopping center for the delivery of community and educational services. Typically, community services have been delivered separately. Schools, recreational programs, libraries, preschool, daycare, health care, employment agencies, and governmental services have been housed in their own buildings. The multi-service center houses different agencies in a shared space arrangement.

Aesthetics & Flexibility

The indoor and outdoor structures and spaces where children go to school need to be aesthetically pleasing and healthful settings to support improved learning. The structure of the school itself and its surrounding landscape is not passive space but an active teaching tool for the learning of physics, geometry, botany, and ecology. Teachers, students, and parents need to learn to "read the environment" and interact with it at several levels.

The school environment should be configured flexibly so that altering the use does not require major reconstruction. Implementing changes should be inexpensive and implemented on an as-needed basis. Current school construction makes changes cost-prohibitive and, once a building is constructed, often difficult to accomplish.

Activity Areas

To support the middle school concepts of team teaching, interdisciplinary and developmental learning, the activity areas identified create strong statement toward greater collaboration. At the same time, the activity areas and suggested spatial relationships lend themselves to site level decision making, which would permit a variety of program strategies to be used simultaneously.

Throughout this study, persons have identified the program, discipline, and social challenges associated with a large middle school. This issue is not unique to the San Diego Unified School District. Extensive research conducted by Johns Hopkins University strongly reinforces smaller middle schools. The reality is that the district has a large number of middle school students that need to housed. One solution identified is break a middle school of 1,200-1,500 students into smaller "houses" on the same campus. This approach meets the needs of middle school teaching concepts and is economically efficient through the sharing of resources such as the library/media center and physical education facilities.

House Plan

- Academic Clusters
- Small Group Instructional Areas
- Staff Preparation & Support Areas
- Decentralized Administration & Counseling Services

Summary of Space Requirements

To address the identified programs and instructional methods within the parameters established by the district and state, the following summarizes the space requirements for a middle school of 1,500 students:

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Program Area	Total Area
Total Area	
Instructional Clusters	56,430
House Support Areas	6,900
Building Administration	3,950
Physical Education	13,520
Library Media Center	9,300
Cafeteria/Performance Area	12,820
Exploratory Area	11,950
Programmable Net Square Feet	114,870
Circulation/Mechanical/Restrooms/Canopies	17,130
Total Square Footage	132,000

II. Introduction

Background

The San Diego Unified School District is a large, urban school district which serves a current enrollment of approximately 127,000 students in grades K-12. By the year 2010, the district is expected to enroll more than 150,000 students.

To address overcrowding in its schools, the district has added portable classrooms, created multi-track, year-round schedules, instituted double session kindergartens, implemented multiple lunch periods and recesses, bused students to other parts of the city, adjusted boundaries, built new schools, and provided permanent additions at school sites.

At the same time, many school buildings throughout the district are now outdated and in poor condition. More than 40% of the district's schools are over 30 years old. These buildings need to be remodeled and modernized to provide children with a productive and safe environment for learning.

To further complicate matters, middle school programs are undergoing major reform. This educational reform movement depends on meeting the unique academic and social needs of middle grade students.

To address these issues, the district is in the process of developing several new schools at the elementary and middle school levels. Voters in San Diego have approved bond issues which provide the funding for the new schools. Members of the community have expressed strong interest in being involved in all phases of the facility planning process.

Because of the number of schools that will be built and because of the changing demands which are being placed upon middle school educational programs, the district has determined that it is necessary to clarify the application of educational philosophy to facilities design, expand community involvement in the design process, and develop educational specifications which can guide the design of the schools into the 21st century.

The Challenge

A school building should realize the major purpose of the facilitation of the educational program. The building must be built so that all aspects of the program can be implemented to develop, maintain, and improve educational opportunity. Facility design must stem from a knowledge of how students learn and develop and interact with their environment. The primary focus must always be the student--and his or her education is the reason for it all. The planning of a new middle school must start with determination and description of the desired educational program.

Description of the program anticipated for a new middle school involves analysis of educational outcomes, spatial relationships, student traffic patterns, class enrollments, technology, community uses, and furniture and equipment.

Educational Outcomes

The successful middle school focuses on the unique needs of its students as well as the relationship of development to learning. "Turning Points: Preparing American Youth for the 21st Century" was released in June of 1989 by the Carnegie Council on Adolescent Development. The report offers eight recommendations in meeting the educational and emotional needs of adolescents:

- Create small communities for learning where stable, close mutually respectful relationships with adults and peers are considered fundamental for intellectual development and personal growth. The key elements of these communities are schools-within-schools or houses, students and teachers grouped together as teams, and small group advisories that ensure every student is known well by at least one adult.

- Teach a core academic program that results in students who are literate, including in the sciences, and who know to think critically, lead a healthy life, behave ethically, and assume the responsibility of citizenship in a pluralistic society.

- Ensure success for all students through elimination of tracking by achievement level and promotion of cooperative learning, flexibility in arranging instructional time, and adequate resources for teachers.

- Empower teachers and administrators to make decisions about the experiences of middle grade students through site-based management.

- Staff middle grade schools with teachers who are expert at teaching young adolescents and who have been specially prepared for assignment to the middle grades.

- Improve academic performance through fostering of the health and fitness of young adolescents.

- Reengage families in the education of young adolescents by giving families meaningful roles in school governance, communication with families about school programs and student progress, and offering opportunities to support the learning process at home and at the school.

- Connect schools with communities, which together share responsibility for each middle grade student's success.

Interrelationships of Spaces
The entire school campus is a learning laboratory using external space as well as internal. Taking advantage of the Southern California climate, schools use outdoor spaces as extended learning areas in which students engage in science, art, and physical education activities.

Internal and External Student Traffic Patterns
Making use of the resources available on and off site, students move about freely within the classroom and the school campus. Some of the most valued resources sought out by students are human--staff, fellow students, visiting experts from higher education institutions, and mentors from business and industry.

Furniture & Equipment
Classrooms vary in shape and size. The rooms are no longer filled with individual student desks; instead, tables and chairs are arranged to facilitate group activities.

Teachers and students should have storage space for personal belongings, papers, and books as well as "institutional" storage for supplies and materials. Work areas exist with direct access to copiers, A/V production, multi-media, and telephones. Teacher preparation areas located in close proximity to classrooms allow teachers to meet, talk, and focus on the needs of students.

Visual, Unique Requirements
The school facility has the ability to capture the child through pleasing aesthetics and design, making him or her feel that the space is special; in turn, the child feels special. The aesthetics affirm the value of the individual student and spaces are provided for action, reaction, and admiration of the accomplishments of the self and others. The facility layout should be easy to comprehend, which maximizes the sense of identity often lacking in adolescents.

Present and Future Class Enrollments

Today's children bring a rich mix of experiential, ethnic, linguistic, and cultural backgrounds to the school environment--differences which should be recognized, appreciated, and accommodated by the instructional program. Children from over 40 different language groups who are learning English as a second, third or fourth language make up 50% of students entering kindergarten in many San Diego schools.

Technology

Increasingly, student work areas will be used to access information in video, graphic, and text formats via networks maintained through the library media centers. These electronic networks link resources within the school, among schools, and with other local, regional, and national information centers. Students should have the ability to work together across school and district boundaries via networks that allow them to see and hear each other and transfer text and graphic information between sites.

These same networks can invite students into museums and laboratories with opportunities to talk with experts via electronic field trips. Students may even use the networks to plug into schools from home when illness or other situations prohibit them from participating more actively in the "instructional environments" of the schools.

Community Interface

Community/school partnerships will play an integral role in the middle school program. They provide students with expanded learning opportunities as well as professional growth opportunities for staff. Use of outside experts and university interns in the classroom permits staff to work for extended periods on developing their own skills or on developing new areas of the curriculum or instructional program.

The description of the educational programs provides the basis from which design and specification decisions may be rendered by the architects. The primary architectural responsibility is the creation of a physical environment which will facilitate the performance of the many educational tasks and functions defined.

The Process

The team approach to the planning process was used in developing this document. The efforts of many people--administrators, faculty, staff, community, architects, and consultants--were combined. Relevant facts and the thinking of many interested people were brought together in a series of discussion meetings designed to focus on the educational program in general, plus specific needs of individual instruction and auxiliary areas.

This same approach will be necessary to address the needs of each new middle school project if the dreams, goals, and unique needs of the local community are to be realized.

III. Project Parameters

Size of Schools

The middle schools of the San Diego Unified School District should serve 1,200-1,500 students. Eighty-eight square feet per student is the recommended space allotment by the district. The total required square footage for a 1,200 student building is 105,600 square feet. For a school with 1,500 students, the total square footage of the school would be 132,000 square feet.

Grade configurations at the middle school level include grade 6 through grade 8, grades 7 and 8, and grade 7 through grade 9.

Size of Sites

To determine the size of school sites, the District has established a guideline of one acre per 100 students. A school with 1,200 students requires a site of 12 acres; a school with 1,500 students requires 15 acres. In some areas of the city where availability of land is severely limited and land costs are high, a ratio in excess of 100 students per acre may be necessary. Ideally, site sizes should be much larger since middle schools frequently include extensive outdoor physical education and recreational areas. Sites are to be master-planned for future growth to accommodate up to a 40% increase in enrollment.

Because some of the new schools will be located in the mid-city area, obtaining the ratio of one acre per 100 students may not be possible. Careful site layout with multiple story structures will be required.

Portable/Modular Construction

According to district guidelines, 30% of classroom space is to be composed of portable classrooms, which translates into approximately 15 classrooms for a 1,500 student middle school. The district currently has approximately 1,400 portable classrooms [many of which are 20 years or older] and an anticipated need for additional portables to accommodate growth and demographic shifts.

The goal of constructing a building capable of expanding and contracting based on enrollment fluctuations and demographic shifts in neighborhoods is a worthwhile goal; however, the means for accomplishing this goal is in the process of being re-examined. The traditional portable classroom that the district has previously constructed does not provide the flexibility to meet the programmatic requirements identified for new middle schools.

IV. Visionary Plan

A. Goals

The San Diego Unified School District has developed four goals which guide the district's work and professional development of its employees. These goals are the focus of all district plans and use of resources. They are as follows:

- Restructuring for Excellence in Learning Outcomes
- Restructuring for Excellence in Teaching Practices
- Restructuring for Excellence in Collaboration
- Restructuring for Excellence in Integration

The framework for restructuring adopted this year from the National Alliance for Restructuring supports and promotes systematic change. It includes five design tasks:

- Curriculum, Instruction, Technology
- Assessment & Accountability
- Health & Human Services
- Public Support & Engagement
- High Performance Organization.

B. Vision Statement

In the new definition of learning, students are actively engaged in challenging tasks that relate to them; they understand the subject matter because they can apply their knowledge to new situations, and learning is an enriching part of their daily lives. Teachers are largely facilitators; sometimes listening, sometimes redirecting their thoughts, sometimes coaching or explaining.

This new definition of learning is the desired learning environment for all San Diego classrooms.

The purpose and core values of the district are reflected in the following vision statement reviewed and revised by the Restructuring Leadership Team in December 1992:

> *We envision a multicultural school district where diversity is cherished, high performance is expected, and where:*
>
> - *All* ***students*** *are learning, achieving, and meeting world class standards to become literate, thinking, contributing members of a multicultural society.*

- *All **staff** are supporting teaching and learning as demonstrated in their relationships, attitudes toward work, and every decision they make.*
- *All **parents** are actively supporting their children's learning by making education and school a top priority in their children's lives.*
- ***Community members** are supporting students, staff, and parents by encouraging and recognizing excellence through marshaling resources for education.*
- ***Local, state, and federal government leaders** are enacting public policy and allocating sufficient resources that guarantee optimum conditions for children.*
- ***All schools and district departments** are organized and operated to provide for the continuous improvement of teaching and learning.*
- ***Business, community organizations, foundations, and educational institutions** are engaged in substantive, supportive partnerships with schools, sharing the same goals to create and maintain high performance.*

V. Curriculum & Instruction

A. Future Trends

"Caught in the Middle: Educational Reform for Young Adolescents in California Public Schools" presents a reform agenda for grades 6, 7, and 8, developed by the Middle Grade Task Force as commissioned by Bill Honig, California Superintendent of Public Instruction.

The success of this effort depends on meeting the academic and social needs of young adolescents. The most effective instruction to meet these needs emphasizes academic integrity while making emotional connections with students.

Middle school is a great time of change for students--they are "caught in the middle" in more ways than one. Addressing their needs is especially difficult since they span a wide range of intellectual, physical, psychological, and social development. The middle grades represent the last chance to develop a sense of academic purpose and personal commitment to educational goals. Failure at the middle school level often means dropping out in high school.

The first challenge for middle grade schools is to make sure that the students are "connected" to their school's goals and purposes in a positive way and have an opportunity to increase their self-esteem. The schools should provide a caring transition as students move from elementary to high school. The second challenge to the middle grade schools is to prepare students for academic success in high school.

The Middle Grade Task Force has developed 22 principles with specific recommendations for each to meet these challenges. The principles read as follows:

1. *Every middle grade student should pursue a common, comprehensive, academically oriented core curriculum irrespective or primary language or ethnic background.*

2. *Every middle grade student should be empowered with the knowledge derived from studying the ideas, experiences, and traditions found in the core, elective, and exploratory curricula.*

3. *Every middle grade student should develop the capacities for critical thought and effective communication.*

4. *Every middle grade student should be helped to personalize ideals and to develop the ability to make reasoned moral and ethical choices.*

5. *Every middle grade student should develop a repertoire of learning strategies and study skills which emphasize reflective thought and systematic progression toward the goal of independent learning.*

6. *Instructional practice should emphasize active learning strategies which are consistent with the goals of the core curriculum and the developmental characteristics of young adolescents.*

7. *Every middle grade student should have timely information about the relationship between the curricula of the middle and secondary grades and should be provided access to the opportunity to prepare for the broadest possible range of academic options [curriculum paths] in high school.*

8. *Every middle grade student should have access to the most advanced levels of middle grades; this opportunity should be facilitated through educational policies and practices which make the highest level of content mastery a valid and obtainable goal for vastly increased numbers of students.*

9. *Every under-represented minority middle grade student should receive encouragement and incentives to pursue academic and occupational goals.*

10. *Many middle grade students are "at risk" of dropping out of school; they should have access to educational programs which emphasize personal commitments to academic achievement.*

11. *Many middle grade students require specific primary health care services*

and strong counseling and guidance programs in order to be able to concentrate their intellectual abilities on academic goals.

12. Every middle grade student should experience a positive school culture which reflects a strong, student-centered educational philosophy.

13. Every middle grade student should have access to extra-curricular and intramural programs which develop a sense of personal connectedness to school through activities which promote participation, interaction, competition, and service.

14. Every middle grade student should be accountable for significant standards of academic excellence and personal behavior.

15. Every middle grade student should experience a successful and positive transition among elementary, middle, and secondary levels of school organization.

16. Middle grade education should be identified with grades 6, 7, and 8; disparities in state funding formulas among elementary, high school, and unified school districts should be eliminated for these grades.

17. The school schedule for the middle grades should be a direct reflection of a sound educational philosophy and should facilitate equal access by all students to the full range of instructional programs and student support services.

18. Assessment programs for the middle grades should be comprehensive; they should include measurement of a broad range of educational goals related to student achievement and program effectiveness: the primary purposes of middle grade assessment should be to compile data which lead to improved curriculum and instructional programs and more effective student support services.

19. Middle grade teachers and principals should be prepared to teach/administer grades 6, 7, and 8; specialized preparation should address the content areas of the core curriculum , instructional strategies which emphasize active learning, and the developmental characteristics of young adolescents.

20. Middle grade teachers and principals should participate in comprehensive, well-planned, long range staff development programs which emphasize professional collegiality.

21. Parents, communities, and school boards should share accountability for middle grade educational reform.

22. *A partnership involving local school districts, institutions of higher education, and the State Department of Education should be created to facilitate the development of 100 state-of-the-art middle grade schools; the mission of these schools should be to serve as a catalyst for middle grade educational reform throughout California.*

For all middle grade students there is a need to ensure an intellectually stimulating school environment. New instructional strategies and organizational models must be developed which have the capacity to translate the principles of middle grade educational reform into the real world of students and teachers.

To reach the ambitious goal of providing a rich and rigorous education to all students, a long-term effort will be required that redefines every aspect of middle school education. The San Diego Unified District is on its way in meeting the challenges posed by Caught in the Middle, and the middle school learning environments of the district will reflect this student-centered approach.

The specifications in this document are tailored to meet the needs of this approach to learning in concert with the needs specific to the San Diego Unified District. The following common expectations held by the district reflect the recommendations of "Caught in the Middle," but are specific to the district:

- All students mastering reading skills and comprehension by grade three or by their third year in a district school, if primary language student.
- Students achieving performance standards in writing and speaking skills at district established grade levels or on a district alternative or equivalent if primary language or special education student.
- Reduction in student absences and in non-apportioned absences.
- Reduction in student suspensions and expulsions.
- Increase in students meeting college entrance requirements.
- No secondary students earning less than "C" in core subjects.
- A reduction in drop-out and retention rates and an increase in graduation rates.
- Students completing elementary and middle level education on time as demonstrated by a timely accumulation of class credits.
- Maintenance of a clean, safe campus.
- Increased parent satisfaction as determined by annual district survey.

- Student preparation for making the transition from school to work.
- Increased engagement and involvement of parents and community supporting student learning.
- Evidence that principal and school staff are engaged in learning or reflective study which is directed toward district goals.
- Governance team which uses the comprehensive site plan and ensures the continuous development of student achievement within a high performance organization [composition, training, focus on student learning].
- Evidence of respect for diversity among students, parents, staff, and community.

B. Educational Programs & Teaching Concepts

The middle school program is based on team teaching with a focus on a project-based, interdisciplinary curriculum. This method does not exclude direct instruction, learning of facts or subject emphasis. Middle school concepts emphasize learning how to think and subject matter content as interdependent. The shift from a subject-based curriculum with teacher as "dispenser of knowledge" to a hands-on, student-centered, experience-based curriculum with teacher as "coach" is essential to putting the middle school concepts into practice.

The San Diego Unified School District has embraced a wide variety of teaching approaches at the middle school level. These include:

- grade level teaming [2 or more teachers combine their talents to teach a group of students from the same grade]
- subject-based, departmental instruction
- multi-age groupings [students grouped together across grades]
- performance-based advancement [advancement based on competency and mastery, not age or time spent in class]
- computer-assisted instruction
- individualized instruction
- cooperative learning groups
- large group instruction.

All of these approaches may be viewed as a "tool box," and the appropriate use of these "tools" is based on the individual needs of the student.

The San Diego Unified School District middle school program is integrated within the curriculum and is designed to help students become more effective learners and thinkers through the acquisition of skills and knowledge that can be applied to academic, interpersonal, practical, and novel situations. A framework may include:

- Thinking Processes
    - a. problem solving
    - b. decision making
- Reasoning
    - a. inductive
    - b. deductive
- Critical Thinking Skills
    - a. organizing information
    - b. analyzing information
    - c. expanding information
    - d. synthesizing information

Several magnet programs exist with emphasis on a variety of subjects including: science, mathematics, and computer-related learning experiences: a humanities approach in conjunction with health professions; an integrated bilingual learning environment; a Spanish immersion program; and a community school promoting excellence by providing all middle level students a single, academically enriched curriculum within a multi-ethnic, student-centered environment.

Subject areas in the middle grades include:

Grade 6	Grade 7	Grade 8
Integrated Language Arts	Language Arts	Language Arts
Mathematics	Mathematics	Mathematics
Social Studies	Social Studies	U.S. History
Science	Science	Science
Health/Safety	Physical Education	Physical Education
Physical Education	Fine Arts	Industrial Technology
Visual & Performing Arts	Consumer & Family Studies	Consumer & Family Studies
	Industrial Technology	ExploringComputers
	Exploring Computers	Business Education
	Business Education	Foreign Language
	Foreign Language	Health
	Health	Library/Media
	Library/Media Center	Guidance
	Guidance	

Implementing an outcome-based accountability and assessment approach includes making students more responsible for their own learning using daily goal setting, hands-on learning, authentic assessment, problem-solving activities, portfolio development, and exhibitions. Design implications may include:

- self-directed learning spaces linked to curriculum
- environment that supports different types of assessment
- storage space for completed projects and projects in progress.

C. Technology

Technology is rapidly becoming an integral part of the educational program, and the San Diego Unified School District has developed a five-year plan to address technological needs. Its major focus is the integration of technology in the instructional program to improve learning outcomes and prepare students for the future. Technology is a tool, used to access information and facilitate learning. It should be transparent, easy to use, and portable. Prominent features of the plan include:

- Technology will become an integral part of the instructional program and its use infused in the curriculum in all subject areas.
- Students and staff in every school will benefit each year of the implementation plan.
- All students will have ready access to technology.
- All teachers will have a work station with a networkable computer, printer, and LCD panel.
- All sites will have presentation technology capabilities: VCRs, monitors, video projectors, laser discs, overhead projectors.
- All classrooms will have four networked work stations for students' use.
- All secondary Library/Media Centers will have an automated information/management system. All elementary schools with large library collections will have an automated information management system.
- Staff training will be commensurate with acquisition of equipment.
- All teachers and support staff will have initial and ongoing training to develop and enhance their technological skills.
- A district technology training center will be established at the Dana site.
- A technology specialist will oversee implementation of the plan and coordinate the staff awareness and training component.

It is suggested that there be a balance between investing in building infrastructure and actual equipment. Infrastructure includes such items as optical fiber wiring, conduit, and cable trays. Equipment includes computers, monitors, phones, video distribution devices, and file servers.

It is recommended that the design of the middle school include all building infrastructure requirements [see Part II, Appendix for typical requirements]. It also recommended that the actual technology system and equipment not be purchased until 6-9 months prior to occupancy to take advantage of new technologies and cost reductions.

Access to technology should not be limited to any particular area within a school, rather it should be found in all areas. From teacher preparation areas to the desks of students, technology empowers users and expands instructional experiences and resources beyond the walls of the school. Examples of instructional uses include:

- Access to information services supported nationally such as DIALOG, Internet, CompuServe, and National Geographic Kidsnet.
- Delivery of instruction over distances between schools; between businesses and schools; among institutions such as libraries, museums, institutions of higher learning, and K-12 classrooms.
- Expanded opportunities for communications among staff and students within buildings, between schools, and within world-wide communities of professionals and learners.
- Facilitation of routine tasks through the use of word processing, data base managers, and other utilities.
- Production of instructional materials expressly to meet defined instructional needs of an individual or group of learners.
- Expression of student learning, creativity, and achievement through the use of dynamic media. [For example, computer assisted music composition, computer art, animation, and the merger of technologies into multi-media productions.]

The recommendations for the implementation of a telecommunications system will maximize the potential of the District to implement technology available today and position the District to take advantage of technological developments in the future. Three major components have been identified:

Voice:	Telephone and voice communications throughout the entire building as well as to other persons in the school system and external resources including parents and community members.
Data:	Data retrieval capabilities throughout the building as well as network capabilities district wide and to outside data bases

Video: Video distribution throughout the building with interactive video capabilities to support multi-group instruction, distance learning, and providing access to a wide range of internal and external resources.

It is recommended that most [if not all] instructional and support spaces have full voice, data, and video accessibility. This would enhance the flexibility of the learning environment to respond positively to alterations in the use of space. The wiring and other infrastructure components should be the first priority since terminal devices can be added later. The facility should have surplus electrical power capacity to permit the expansion of technology.

Classrooms need to have the flexibility to support the range from virtually no technology to full blown computer centers. The following components should be included in each classroom:

- Four [4] drops--data, voice, video
- Electrical power available [1 quad outlet per drop] and/or raceway wiring system to support from 4-6 computers
- One [1] monitor
- One [1] control box/telephone
- One [1] teacher work station
- Counter areas for four [4] computer work stations

Careful attention should be given to furnishings [i.e., student desks, specialized or customized casework] and location of data ports, white boards, and monitors.

Office areas have the following needs:

- One [1] voice and data drop
- Electric power availability [quad per drop]
- Capability to support computer, printer, and telephone operations
- One [1] telephone [removable]
- One [1] computer/telephone [removable]

Small group instruction/conference areas should include:

- Video, voice, and data drop
- Electric power availability [quad per drop]
- Capability to support computer, printer, telephone operations, and video monitor
- One [1] telephone [removable]
- One [1] computer/telephone [removable]
- One [1] video monitor [removable]

Head-end equipment includes all of the devices to operate or control the video data and voice communications system. It will include devices such as:

- Telephone operating equipment
- Video control systems
- VCRs
- Laser discs
- CD interactive
- File servers
- Video still players

[See Part II Appendix for typical layouts.]

VI. Community Functions

A. Community Use of Facilities

Community involvement in education and education involvement in the community can take a variety of forms. The following is a partial list of potential community uses at the middle school level:

- Community Theater
- Speech/Debate Clubs
- Latch Key/Extended Day
- After School Youth Enrichment
- Adult Education
- Community Meetings
- Mentoring Programs
- Parent Involvement
- School/Business Partnerships
- Alternative Education Programs
- Teen Parenting Programs
- Community College Classes
- Satellite Campuses for Higher Education
- Recreation Programs
- Health Screening
- Substance Abuse Intervention
- Senior Citizens Programs
- Offices for Other Social Agencies
- Special Seminars
- Outdoor Festivals
- Intramural Sports Programs
- Church-Related Activities

Based on limitations established for the size of the facility and budget constraints, most of the community uses will need to focus on shared space--space that is used primarily for middle school programs during the school day and community uses during non-school hours.

Priorities need to be established at the local site level to determine future community activities that may be added in order to be incorporated in the overall master plan.

Even within these constraints, opportunities exist. The areas that have the greatest possibility for community usage include:

- Performance/meeting area
- Access to library/media center
- Athletic fields
- Conference rooms and small group instruction areas
- Computer labs
- Art rooms
- Community room

Special considerations include:

- Careful attention should be given to furniture and equipment selection for shared uses by middle school students and adults.
- The facility and site should be configured and zoned to enhance parking and circulation, security, and energy conservation.
- Adequate signage [bilingual where appropriate] to assist community members.
- Lay-out of community use areas should be of a "user friendly" design.

Even though budgetary constraints may prohibit the incorporation of extended community use at this time, the building and site should be master-planned to incorporate these concepts at a later date.

School/Community Partnerships

Collaboration and partnership require greater cooperation in the planning of schools and community facilities. It is important for the school district and other governmental agencies to participate collaboratively in the planning of schools.

Planning for future schools should include joint use considerations at the beginning of the process. School districts and governmental agencies are beginning to realize that cooperation is needed, especially considering the ever-shrinking budgets and meeting the diverse needs of the community. There are potential opportunities to jointly developing parks, libraries, and one-stop shopping centers for human services. Partnerships and joint ventures should be considered and are encouraged by the Board of Education.

Multi-Service Center

Today, changing demographics and climate of the community require that schools adapt. Schools teach not only the "basics" but also address many social and family issues. This is a heavy burden that cannot be accomplished by the schools alone. It is imperative for the city, district, and community agencies to work with the school in a partnership.

The multi-service center concept incorporates a "one-stop" shopping center for the delivery of community and educational services. Typically, community services have been delivered separately. Schools, recreational programs, libraries, preschool, daycare, health care, employment agencies, and governmental services have been housed in their own buildings. The multi-service center houses different agencies in a shared space arrangement.

The initial start-up cost for this type of facility would be greater than that of a traditional school, but the cost of housing and operating all of the services separately far exceeds the collective cost. For years, the debate has been where the school's responsibility begins and ends. The multi-service center clearly assumes more responsibility than the typical school, yet it is composed of several agencies to handle the burden. Articulation and cooperation among service providers is essential and appears to be possible in the current climate.

Developing and operating a successful multi-service center requires a different leadership style than typically found in education.

Issues that need to be taken into consideration include:

- Location of the Facility and Its Constituents
  Not all social service agencies share the same geographical area. One site may be more appropriate for one group than another. Because such a facility will be larger than a typical school, more space is needed and greater attention should be paid to where the facility is located in conjunction with the surrounding neighborhood.

- Size of Building
  Multi-service centers can become large and complex institutions when several services and programs are added to an already large school. Instead of one mega-building, the center may consist of a series of small, interconnecting facilities. Another option is to organize the facility as a cluster of pavilions along a central mall or enclosed street. The shopping center concept best characterizes most multi-service centers.

- Separation of School, Community & Shared Spaces
  The most common practice in the interior layout of centers is to separate spaces intended for school use only, community use only, and shared use. The facility 's entrances and corridors are designed so that each area can be accessed separately. Though one may assume shared space among agencies in a shared facility would be the norm, it is not. Agencies tend to carve out their own "turf" within a multi-use facility. However, the goal should be to integrate services.

- Finance
  Often educational and community services have their own capital improvement and operating funding sources. There are a number of state policies and statutes that prohibit shared use of space or co-mingling of funds even though most policy-makers readily endorse the multi-service center concept. Several state governments have had to revise current statutes and practices to make this concept permissible and others have actually provided school districts and governmental agencies with financial incentives to engage in joint use of facilities.

- Governance
  Typically the facility is owned by one agency [most often the school system] and is operated through a joint governance structure, such as an interagency council.

In planning a new middle school, careful attention should be paid to community uses. This will require involvement of the community and collaborative work with other agencies. Minimally, middle schools should be planned for community use during non-school hours and master-planned to permit future collaboration.

B. Safety & Security

Building security can be addressed in an active or a passive manner: active is based on security systems; passive is based on program design, building configuration, and community participation. Schools should be based on passive concepts with applied active concepts where necessary.

In 1988, the California Department of Education and the Fullerton, California Police Department developed the following chart:

Behavioral Problems Through Time	
1940s	**1980s**
Talking	Drug Abuse
Chewing Gum	Alcohol Abuse
Making Noise	Pregnancy
Running in Halls	Suicide
Out of Place in Line	Rape
Improper Clothing	Robbery
Not Using Wastebasket	Assault
Messy Lockers	Arson
Holding Hands	Bombings

If we deal with the symptoms of the problem, we tend to focus on the active security procedures that can be implemented. If we deal with the cause of the problem, we are likely to address most of these issues through passive or program and building configuration solutions.

The problems and their causes are multi-dimensional: some issues can be addressed; others cannot. Causes include, but are not limited to: family problems, lack of sense of belonging, lack of identity, lack of communication, lack of accountability, and student/teacher relationships. Passive program and building configuration should be the primary focus and active security systems the secondary focus.

By organizing a building, especially at the secondary level, into teams, a number of changes occur which will reduce behavior problems:

- Since the greatest number of discipline problems in a school occur when students switch classes and have to travel from one end of the building to the other, having students spend the majority of their day in one section of the building, reducing movement, will result in less discipline problems. The same is true with block scheduling.

- Teams of teachers having responsibility for the same students improves the student/teacher relationship, results in greater continuity, and monitoring of behavior issues.

- Decentralized administrative offices, counseling, and teacher preparation areas place adults in closer and more direct contact with students. Also, increased use of the facility by the community brings more adults on campus and increases mentor contact with students.

- Students have a greater sense of belonging and identity. For the majority of the day, their place is in the cluster/house.

The layout of the building:

- Avoid blind spots, corners, and cubby holes.

- Locate administrative and teacher preparation offices with good visual contact of major circulation areas [i.e., corridors, cafeteria].

- Develop spatial relationships in such a manner that there are natural transitions from one location to another.

- Locate restrooms in close proximity to classrooms.

- Locate areas likely to have significant community [after-school] use in a manner in which they have good access to parking and can be closed off from the rest of the building.

Types of building material:

- Use durable wall surfaces that are easy to clean and graffiti can be removed.

- Incorporate pitched roofs which deter roof entry and are aesthetically pleasing.

- Limit size of windows. Use multiple smaller windows rather than one large window. Provide security screens where appropriate.

Uses of Technology:

For instructional and administrative purposes new facilities will have extensive technology systems. These same infrastructure and technology components can be used to enhance building security.

- Phones in every instructional and support area.

- Building-wide "all-call."

- Motion or infra-red detectors which can also be configured to conserve lighting costs.

- Video cameras that are used for instructional purposes could also be used for security purposes during non-school hours.
- Smoke and heat detectors located throughout the building

Vehicular and Pedestrian Traffic

- Separate bus drop-off area from other vehicular traffic.
- Separate staff/community parking area.
- Separate student [pedestrian] traffic flow.

Landscape/Playgrounds/Site

- Separate athletic fields and informal gathering areas.
- Locate athletic facilities away from building.
- Recess building on site to avoid vehicular and pedestrian conflicts.
- Use aesthetically pleasing fencing around perimeter of the building. Place some buildings along the outside perimeter to avoid extensive fencing.
- Provide security lighting around buildings and parking lots with photocell timer with on/off capacity.
- Use low height shrubs and other landscaping with the exception of trees to deter hiding.

VII. Aesthetics & Flexibility

A. Learning Environments

During early adolescence, students enter a period of trial and error. When young people face unprecedented choices and pressures [such as alcohol, drug, and sexual experimentation], all too often the guidance they received as children is withdrawn. Freed from the dependency of childhood, but not yet able to find their own path to adulthood, many adolescents feel a desperate sense of isolation. Surrounded only by their equally confused peers, too many make poor decisions often with severe consequences. Middle schools have the potential to be a powerful force in helping young people thrive during their adolescence rather than fail.

The indoor and outdoor structures and spaces where adolescents go to school need to be aesthetically pleasing and healthful settings. The facility should capture the students, making them feel that the space is special, and therefore infer that each individual is special. Aesthetics that affirm the value of the individual must be emphasized, with spaces for the admiration of the accomplishments of self and others. The school should resemble a place for academic success, high self-esteem, social interaction, and physical safety.

The facility layout should be especially easy to comprehend and reflect how classes relate to one another in order to minimize the lost feeling common in young adolescents. Spaces should be provided for socialization among students and with teachers.

Characteristics of young adolescents are often interpreted as obstacles to learning. The school should capitalize on the restless energy, fascination with peer culture norms, and curiosity about themselves that are typical of that age group. Spaces should be conducive to eye contact and communication, allowing easy interaction between students and teachers.

To overcome the young adolescent rejection of teaching ["preaching"], the facility should make provisions for the teacher to plan and present materials in a spontaneous, almost magical way. Details, scale, space and other aesthetic considerations are necessary to help capture the attention of an easily distracted student group.

Ongoing assessment of student progress will require facilities to be able to adapt with a changing program. Multi-use of buildings should be the norm. Spaces should allow for a wide variety of specialized instructional and hands-on learning experiences.

Today, students work primarily in groups of 25-35. As technology advances, it is possible that students may become involved in extensive individual learning activities which are supplemented by small group [2-6 students], moderate group [25-30], and large group [50-150] activities. Space should be provided for students to plan work independently and collaboratively, give and/or receive tutoring as wells accept instruction. Consideration should also be given to serve students of various ages from adolescents to adults.

The predominant staffing pattern is composed of teachers, supplemented with para-professionals and specialists. As the programs and groupings change, a more differentiated staffing pattern may emerge with lead or master teachers and more specialists and para-professional facilitators.

Current school construction and configurations of lining up 960 square foot classrooms make changes cost-prohibitive and, once a building is constructed, often difficult to accomplish. Facilities should be constructed in a manner in which change is the norm, not the exception. Building materials and furniture should be selected to support change and flexibility.

The challenge of developing flexible space is complicated by the restrictions that the district and state have imposed on building square footage and the use of air-conditioning. In virtually all cases, the square footage limitations require circulation space to be located on the exterior of the building. Lack of air-conditioning is a detriment to interior learning environments. Both of these issues need to be taken into consideration and to some extent will negatively impact building flexibility.

It is evident that if a building is to incorporate flexibility, extensive staff training needs to occur on how the building might be used to meet the needs of students most effectively.

By rethinking spaces, better use of the facilities can be made. Some ideas include: use gardens instead of pavement; use hallways as art galleries or museum strips; and have walls with built-in aquariums. Creativity and functionality should work hand in hand.

One of the major complaints repeatedly stated by students, parents, and staff is the institutional, non-inviting atmosphere of schools. Color, greenery, building materials, and furniture should be selected carefully to develop a pleasing and inviting atmosphere.

The learning environment should be student-centered and designed for "hands-on learning," promoting student autonomy and independence. Space for active participation should be incorporated with modular, flexible classrooms providing opportunities for integrating disciplines and easy access to tools of exploration. The outdoor site should serve as a pro-active learning environment as well.

A student-centered approach is often focused on teaming [grade level or multi-age]. However, spaces characterized by the decentralization of specialized areas and organization into houses and clusters can support a departmentalized approach just as well. These spaces serve to reinforce staff and student communication as well as flexibility.

Modern office environments provide greater insights into flexibility than current school environments. Many of their concepts should be taken into consideration:

- demountable wall systems
- moveable wall systems
- modular furnishings
- expandable/retractable modular buildings
- floor conduits
- non-load bearing wall systems
- race-ways, cable trays
- more generic space that can be adapted to specialized uses

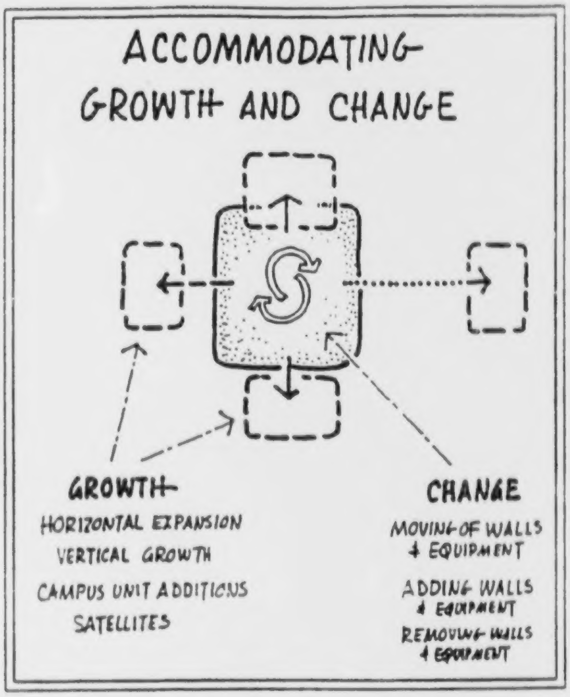
Implementing these concepts is not an easy task. In fact, there are few school systems that have successfully addressed the issue of flexibility. Most have never even raised the question.

The diagrams on the following pages demonstrate these concepts. They appeared in *The Educational Facility Planner* [Volume 30, Number 1, 1992].

The bottom line, however, is that students and teachers need a wide variety of tools to be effective, and under the current construction guidelines, increasing the size of the classroom to accommodate all of these concepts is unrealistic.

On the other hand, having appropriate electrical, mechanical, and technological access to each area and re-locatable and moveable furnishings would provide an opportunity to reconfigure space as needed. Sharing a variety of equipped spaces in team arrangements may result in meeting this objective as well.

Most important, however, is that students and staff feel that they belong. Their ownership is essential.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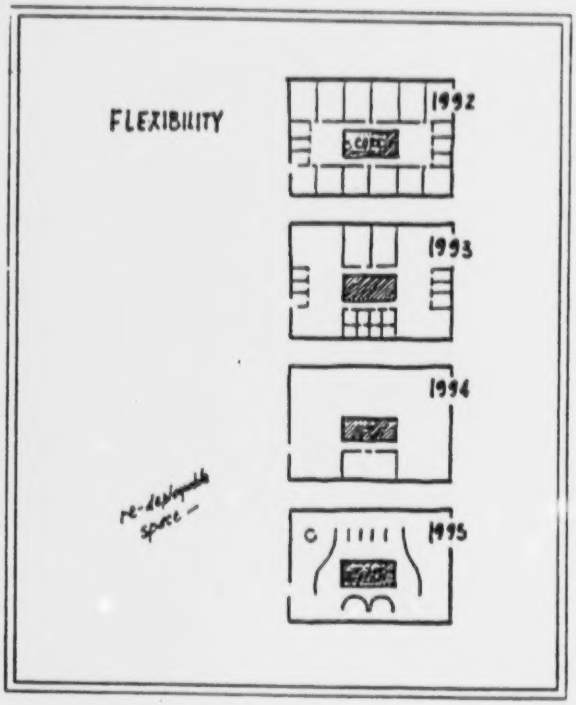
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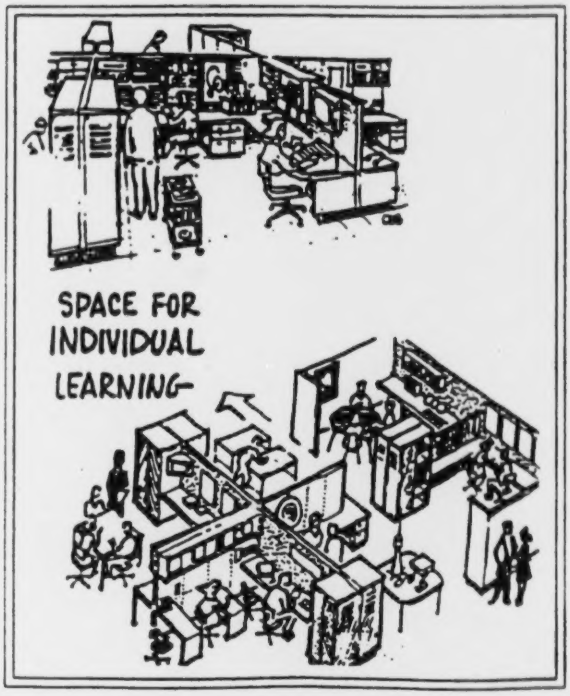
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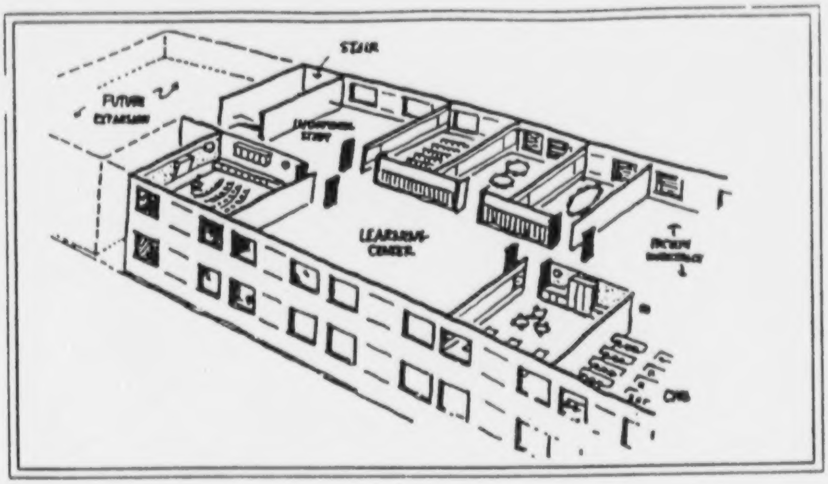
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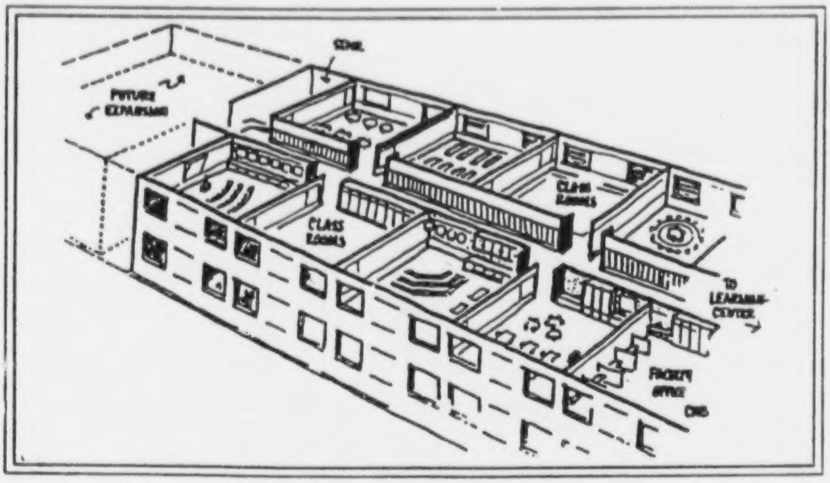
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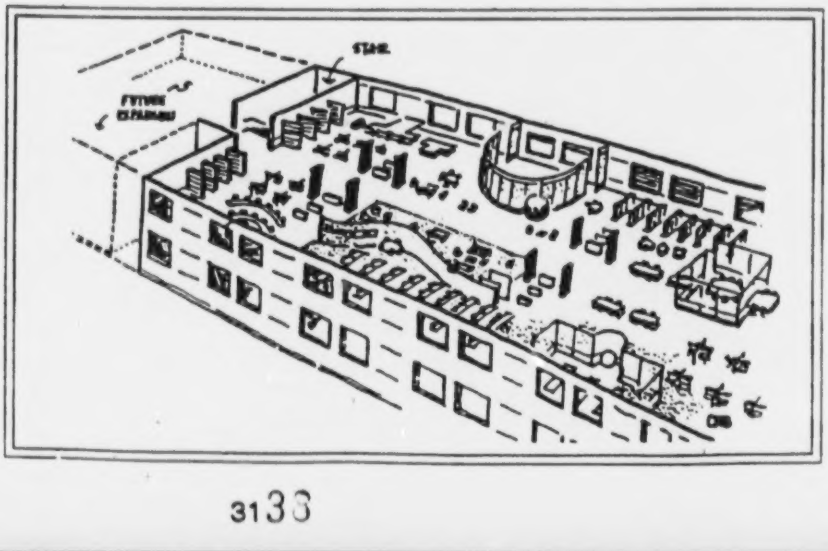
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FUTURE EXPANSION

B. Cultural Diversity

Since the students attending the new San Diego schools will come from many different cultures and an important focus of these schools is to prepare students to function in a diverse world, one way to address these issues is to celebrate cultural diversity through school facilities and programs.

Opportunities exist, both architecturally and programmatically, to celebrate this diversity. A few ideas include:

- Overall building design [use of and information on designs and materials developed by people of color; this information could be included in the walls, etc. where it is appropriate]:
    - architectural style
    - roof material
    - wall finishes
    - doors
    - windows
- Thematic team teaching of different cultures.
- Study of world languages.
- Bilingual signage.
- Development of community plaza concept.
- Furniture selection.
- Ethnic food courts.
- Cafeteria/auditorium arrangements.

The school should resemble the aesthetic qualities of a home. If the school were more like home, learning would be enhanced, the environment would be more comfortable, and community members as well as parents would be more apt to participate in the school. The school should be a safe, nurturing environment, mirroring the cultural diversity of the community.

C. Portable Classrooms

According to district guidelines, 30% of classroom space is to be composed of portable classrooms, which translates into approximately 15 classrooms for a 1,500 student middle school. In many cases, the district constructs portable classrooms on-site at a cost of approximately $70,000 per unit. The cost to relocate a portable classroom is approximately $25,000. The district currently has approximately 1,400 portable classrooms [many of which are 20 years or older] and an anticipated need for additional portables to accommodate growth and demographic shifts.

There are many issues associated with portable units including initial cost, cost of relocation, aesthetics, educational value, handicapped accessibility, flexibility, and long-term value. Using portable classrooms assumes a "self-contained" program delivery. Portable classrooms, as currently configured, do not support team teaching, clustering or other approaches to educational delivery. Portables have limited functional use beyond a traditional "self-contained" classroom.

This limitation severely impacts the middle school program. Portables need to be configured in such a way that supports the house concept.

The primary purpose of portable classrooms is to allow a building to expand and contract to address enrollment fluctuations. Many districts have employed the use of portable units as a less expensive way to construct classrooms. Based on the initial cost of construction, life expectancy, and cost of relocation, these assumed cost advantages may not exist.

The goal of constructing a building capable of expanding and contracting based on enrollment fluctuations and demographic shifts in neighborhoods is a worthwhile goal; however, the means for accomplishing this goal is the process of being re-examined.

The educational program requirements include greater collaboration between teams of teachers. The requirements also call for a variety of instructional spaces [regular classrooms, larger special purpose classrooms, and small group instructional areas].

The concept of lining up portables as totally self-contained units does not facilitate the envisioned middle school program. Portable classrooms or modular construction needs to be designed to support team teaching. One way would be to redesign the portables to form clusters, attachable to permanent structures.

There are several models that may be reviewed. Both Canada [Province of Alberta] and Australia have constructed buildings based on a "Core Plus" concept. The "Core" contains the administrative, physical education, cafeteria, and media center operations and the "Plus" contains the academic portion of the building. The "Core" is permanent construction, and the "Plus" is re-locatable. The Canadian and Australian "Core Plus" concept is still fairly traditional in its academic configurations. It does, however, provide increased connectability of academic units and meets handicapped and other code requirements.

A second concept is designing modular units that are more flexible. Modular units would be re-locatable; have steel frames, steel joists, pitched roofs, and a variety of exterior finishes; and have the ability to be configured into large spaces, small spaces, single-story levels, and two-story levels. Units are designed to be configured into clusters of classroom academic areas added to existing "houses," media centers, offices, and other functions.

Based on the new schools in the process of planning/design and the needs for additional space, the District is likely to spend in excess of $20 million over the next several years on portable classrooms. With the magnitude of the investment that is likely to be made and the need to identify a more adequate solution, the District should engage in developing a new form of modular construction. This might be accomplished by commissioning a special study on modular construction, hiring an architect specifically for this purpose, and forming a partnership with the modular construction industry. The district staff and Board of Education recognize this need and are in the process of addressing this issue.

VIII. Activity Areas

A. Description & Requirements

To support the middle school concepts of team teaching, interdisciplinary and developmental learning, the activity areas identified create strong statement toward greater collaboration. At the same time, the activity areas and suggested spatial relationships lend themselves to site level decision making, which would permit a variety of program strategies to be used simultaneously.

Throughout this study, persons have identified the program, discipline, and social challenges associated with a large middle school. This issue is not unique to the San Diego Unified School District. Extensive research conducted by Johns Hopkins University strongly reinforces smaller middle schools. The reality is that the district has a large number of middle school students that need to housed. One solution identified is break a middle school of 1,200-1,500 students into smaller "houses" on the same campus. This approach meets the needs of middle school teaching concepts and is economically efficient through the sharing of resources such as the library/media center and physical education facilities.

Academic House Plan

The academic house plan divides a large middle school for 1,200-1,500 students into three schools within a school. Each school within a school is called a "house." Each house supports the primary academic program and administrative support areas for approximately 500 students.

To maximize flexibility and site-based decision making, each house should be able to:

1. Support a grade level configuration. One house for sixth grade, one house for seventh grade, and one house for eighth grade.
2. School within a school. Each house would be a school for grades 6-8.
3. Departmental instruction. Academic classrooms would support a departmental approach to instruction.

Each house will contain:

- classrooms
- science rooms
- project areas
- small group instructional areas
- teacher preparation
- administrative & support areas

Spaces to be shared by the three houses include:

- athletic facilities
- library/media center
- cafeteria/multi-purpose area
- specialized areas [art, music, and school-to-work transition]
- overall building administration

Instructional Clusters

Each house will contain three instructional clusters. Each cluster will support approximately 150-180 students.

The three instructional clusters within a house, determined by site-based decisions can be organized to serve the same grade level, to serve a different grade level [one 6th grade, one 7th grade, and one 8th grade], or to support a departmental approach.

It is envisioned that the cluster will contain 5-6 classrooms:

- 3-4 regular classrooms
- 1 science classroom
- 1 technology classroom

The classroom spaces in the cluster need to have the flexibility to support the following educational programs:

- science
- language arts
- mathematics
- social studies
- bi-lingual instruction
- world languages
- special education
- gifted and talented education
- health education
- exploratory programs

The science classroom is larger than a regular classroom and includes sink and counter space around its perimeter as well as a moveable teacher demonstration lab. This room should not be confused with a high school science lab. Instead, it provides space and equipment for students to conduct less sophisticated science experiments. This room will not be used exclusively for science and will be able to serve the programs listed above as well.

The technology classroom has greater number of potential technological devises. This room may be used for art, applied technology, project-based, hands-on learning activities, or regular academic instruction.
In addition the cluster will contain:

- 1 small group instruction area
- 1 science prep/storage area

The small group instruction areas are to serve as an extension of the classroom, support space for itinerant staff, office space for staff, parent/teachers meetings, team meetings, and other conferences.

One of the primary goals of the district is to have the flexibility to adapt to different teaching/learning strategies based on the needs of the students and staff at the local site. Since the district is implementing the inclusionary approach to special education and gifted programs, it is envisioned that specialists will become involved regularly in the classroom, working with students in small groups and individually. All spaces will need to be handicapped accessible, meeting all American Disability Act [ADA] requirements.

House Support Area

The administrative and support functions of a middle school should be located in close proximity to the students and teachers. This plan calls for the administrative and support functions to be decentralized into the three houses of the school. The purpose is to reinforce student-centered learning environment. The administrative and support area for each house will serve the needs of approximately 400-500 students.

The middle school concept is built on a total team approach. The house administrator, teachers, counselors, specialists, and support staff function as a team in meeting student needs. As a team, these persons determine instructional approaches, student scheduling, counseling needs, and use of instructional spaces.

Middle school research has demonstrated that when administrative and support functions are decentralized and in close proximity to the instructional teams of teachers, the following occurs:

- Communication is improved between teams of teachers, administrators and support staff that share responsibility for the same students.

- Administrative and support activities are more focused on the instructional program and the needs of students.
- A stronger relationship develops between students and staff.
- Discipline problems decrease as a result of a smaller, more intimate atmosphere, decreased movement of students across campus, and development of student/adult relationships.

The administrative and staff personnel assigned to this area can vary from school to school. Traditional labels such as "vice principal" and "counselor" are likely to evolve to "team leader" and "advisor."

Most of the District's middle schools have approximately 15-20 administrative staff and specialists in a middle school for 1,500 students. Some are full-time, others part-time. It is envisioned that there will be 4-6 administrative staff and specialists assigned to each house.

The staff workroom/lounge provides teachers and other staff members with a place to meet during their breaks, hold in team meetings, and prepare for classes. It is envisioned that this area will be a multi-functional space with round tables and chairs, some computer work stations, a kitchenette, and informal lounge furniture. Each house will consist of 20-30 staff members which will have breaks at different times of the day. This area should be comfortable and aesthetically pleasing.

Building Administration

The building administration serves the coordinating role for the total middle school, including overall instructional leadership, building management, and liaison with the community and the district's central office. Many of the administrative and counseling functions typically found in the "principal's office" will be decentralized into the three houses of the school. There are certain functions and spaces such as building attendance, finance, health service, and community/volunteer rooms that would be cost-prohibitive to duplicate in each of the houses.

It is envisioned that 4-6 persons will function out of the building administration. The district's central office will determine the number of administrative and support positions for each school with the actual assignment of personnel within the school being a site-based decision.

Since the actual positions assigned to the building administration area will vary, more generic labels are used to describe the spaces. For example: an office may be used by a principal, attendance officers, specialist, or by a collaborating community agency.

The community room is an area where volunteers, parents and other community members are involve in a wide variety of formal and informal activities. This area may be used to conduct parent/community meetings, parenting classes, volunteer work area,

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and serve as a lounge for persons that are involved in school and community related activities. It is envisioned that this area will be a multi-functional space which will consist of round tables and chairs, some computer work stations, a kitchenette, and informal lounge furniture. It should be comfortable and aesthetically pleasing.

Health services provide intervention, care for students who are sick or injured, prevention seminars, screening, and consultation. Health service personnel are involved in extensive communication with building staff, students, parents, and health care providers. Interest has been expressed to engage in greater collaboration with community health services for the screening and referral of students, parents and community members. This area should be master-planned for expansion.

The purpose of a resource/seminar room is to provide space for health service seminars, counseling sessions, special education activities, and large group conferences. It may also be used as a career center.

Physical Education

To support the middle school physical education program, a variety of indoor and outdoor areas are required. Indoor areas require regular classrooms and physical education activity areas. Outdoor hard court areas for basketball and racquetball courts are needed, as are soccer, football, and softball fields.

All middle schools students are involved in physical education which translates into 200-300 students each period taking P.E. Due to square footage limitations and the local climate, most physical education programs are located outside.

The district does not have a middle school interscholastic program. At most schools, after school sports activities are coordinated by the city parks and recreation department, non-profit organizations, and some school intramural programs.

Physical education activities must be designed and constructed with a focus on community use during non-school hours. There is a high demand for both indoor and outdoor facilities.

Library/Media Center

The library/media center will serve as the media hub of the building. This area is changing from a "depository of books" to a "high technology information distribution center." It is not projected that the library functions will discontinue, rather digital technology will enhance voice, video and data communications within the middle school, between district facilities, and with distant learning resources.

Many of the resources traditionally found in a library such as card catalogs, periodicals, encyclopedias, and dictionaries will be supplemented by technological devises. The work room will be transformed into a multi-media production center for creating student projects and instructional material.

It is also proposed that the technology control room be incorporated into the library/ media center that would house the video networking, data networking, and phone systems to be used throughout the building.

Multi-Purpose Room/Performance Area/Kitchen

This area has multiple functions which include cafeteria, performances, assemblies, and community meetings. It is proposed through creative design of interior and exterior spaces, that this area have the ability to house both inside and outside performances. Simultaneously, this area will provide opportunity for indoor eating during inclement weather and open out to an adjoining patio area for outside eating.

In analyzing programming conflicts of sloped flooring for performances and level flooring for cafeteria functions, it was determined that level flooring provides greater flexibility. This flexibility will also provide opportunities to use this area for large group instruction and a potential activity area for physical education.

To accomplish these multiple uses, it is proposed that a performing arts consultant be retained to provide direction on lighting, staging, sound systems, and acoustics.

Exploratory Programs

A middle school includes a number of exploratory programs. These programs include art, music, consumer and family sciences, and technology education [formerly industrial arts].

Each of the building's three houses include classrooms that are equipped to facilitate exploratory programs. These project classrooms, which are larger than normal and equipped with sinks and a higher level of technology, can support some art, consumer and technology education programs. By positioning these project classrooms in this manner, there is greater probability that teachers in these areas will be incorporated in the team teaching activities with the language arts, mathematics, science, and social studies teachers.

Even though a great deal of content can be delivered in the classroom "project" areas identified in the academic house plan, a middle school is still in need of some specialized areas that would be cost-prohibitive to duplicate in each of the houses. These include an art studio, technology education lab, foods lab, and music facilities.

B. Spatial Relationships

Clusters

The cluster of 5-6 classrooms should be grouped together. The classrooms should be connected either by using a moveable wall, through a door, or be located in such a manner that provides easy flow between the classroom areas in the cluster.

There should be an acoustical, moveable wall between two of the classrooms in the cluster to provide the opportunity to develop one larger space equivalent to two classrooms.

The cluster should be located near the house support areas. Strong desire was expressed to have an outdoor patio area adjacent to the cluster to support outdoor learning activities.

House Support Areas

The administrative and support areas for a house should be located in close proximity to the three instructional clusters of the house.

Building Administration

The building administration should be located in close proximity to visitor parking, cafeteria, and the academic houses.

Physical Education

Most physical education activities should be located apart from academic house of the middle school. This separation is desired to avoid noise and visual distractions. There should also be clear separation between hard court areas and play fields to foster separate teaching station area since 6-8 physical education classes will be occurring simultaneously. There should be easy access to parking and pedestrian walkways that facilitates community use without having to "open" the entire school during non-school hours.

Library/Media Center

The library/media center should be located in the center of the middle school campus with easy access to the academic houses. The center of the campus location should facilitate easy access by students and staff. This location will reduce the cost of installing building-wide technology networking.

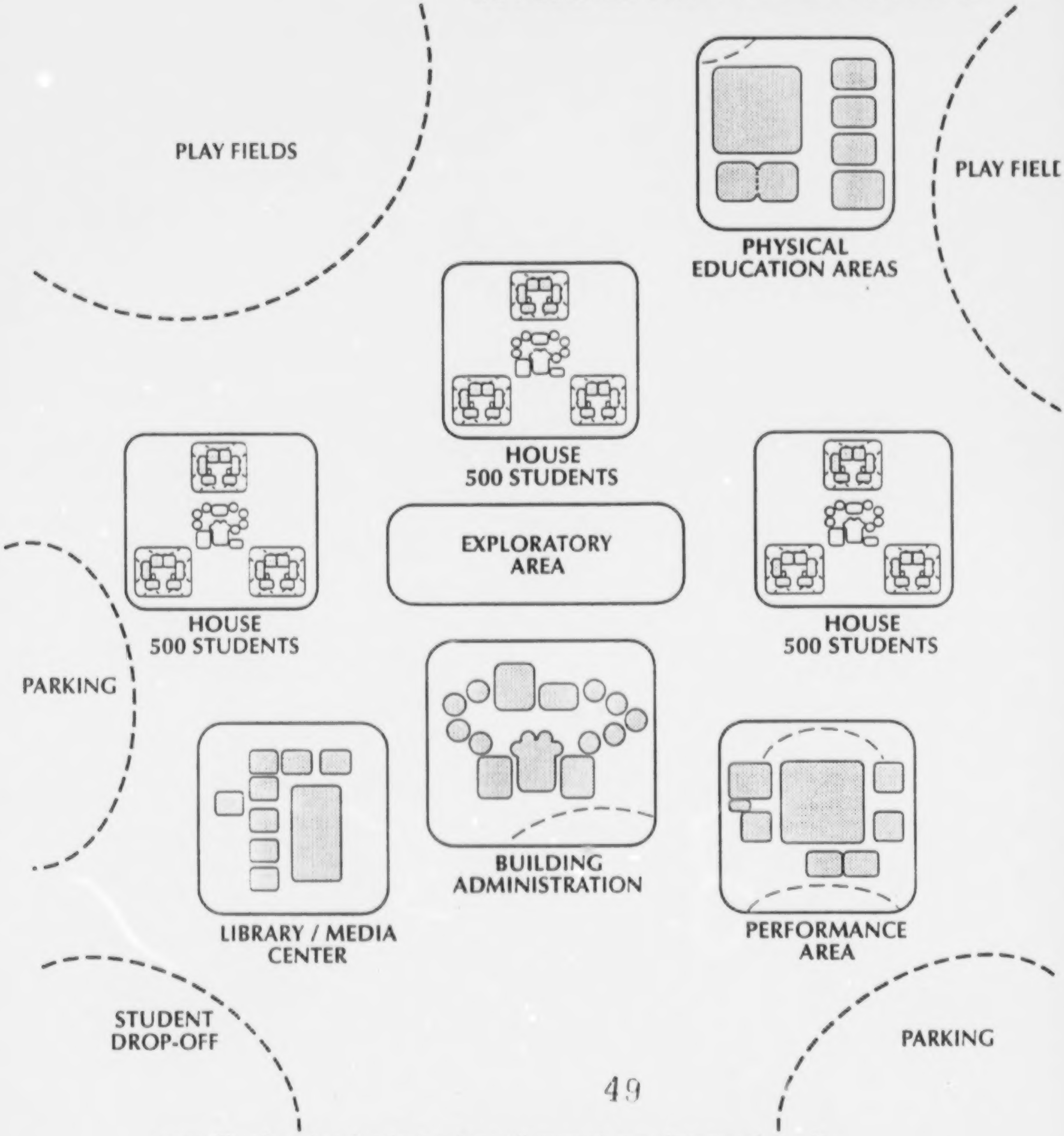
This location will be somewhat compromised by the need for community access since it is envisioned that the library/media center will have increased use by the community during non-traditional school hours.

Cafeteria/Performance Area

The cafeteria/performance area should be located in close proximity to parking, delivery access, building administration and not too distant from the academic houses.

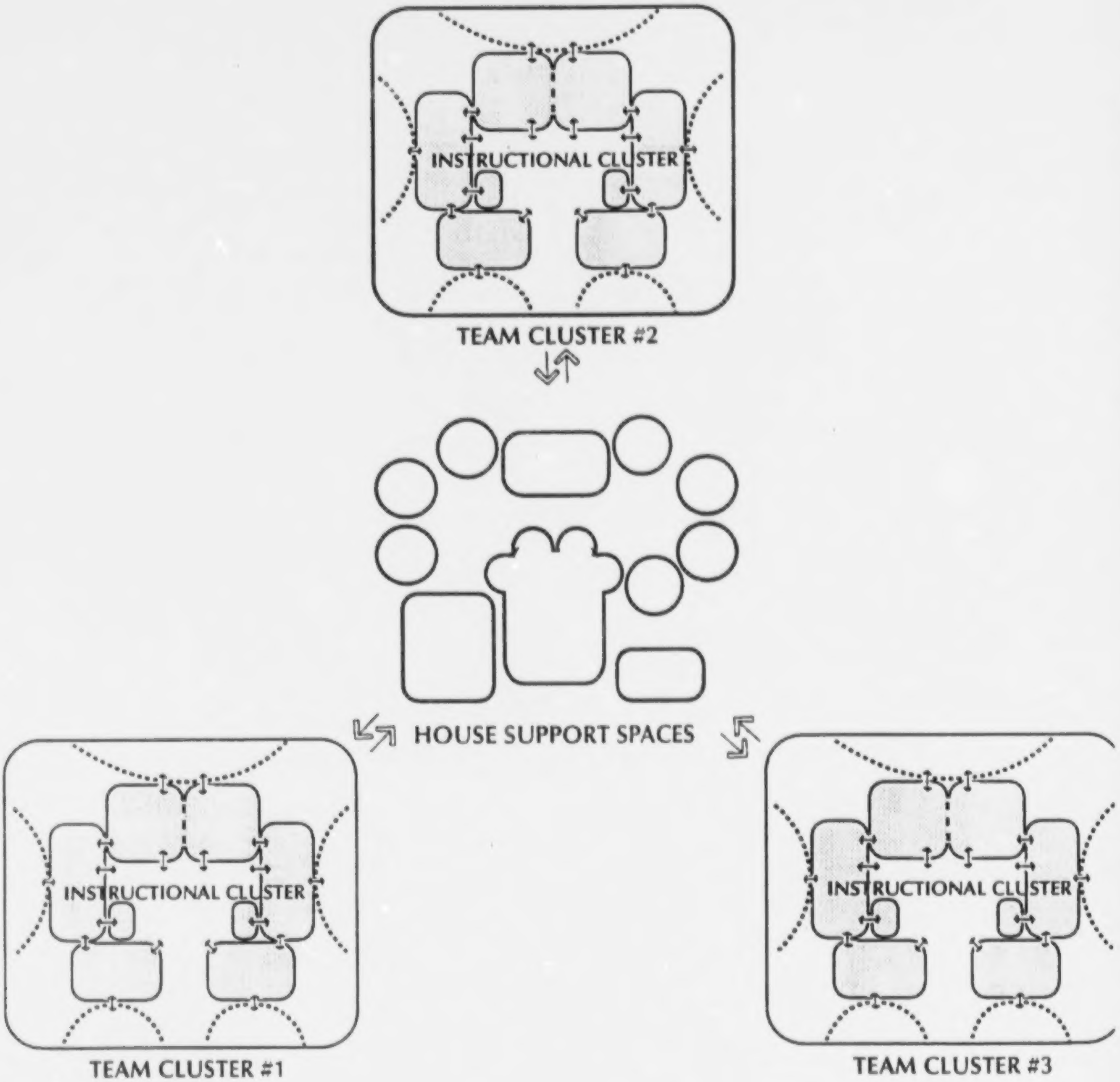
The following diagrams illustrate the spatial relationships between the activity areas in a middle school:

MIDDLE SCHOOL SPATIAL RELATIONSHIPS


PLAY FIELDS
PLAY FIEL
PHYSICAL EDUCATION AREAS
HOUSE 500 STUDENTS
HOUSE 500 STUDENTS
EXPLORATORY AREA
HOUSE 500 STUDENTS
PARKING
BUILDING ADMINISTRATION
LIBRARY / MEDIA CENTER
PERFORMANCE AREA
STUDENT DROP-OFF
PARKING

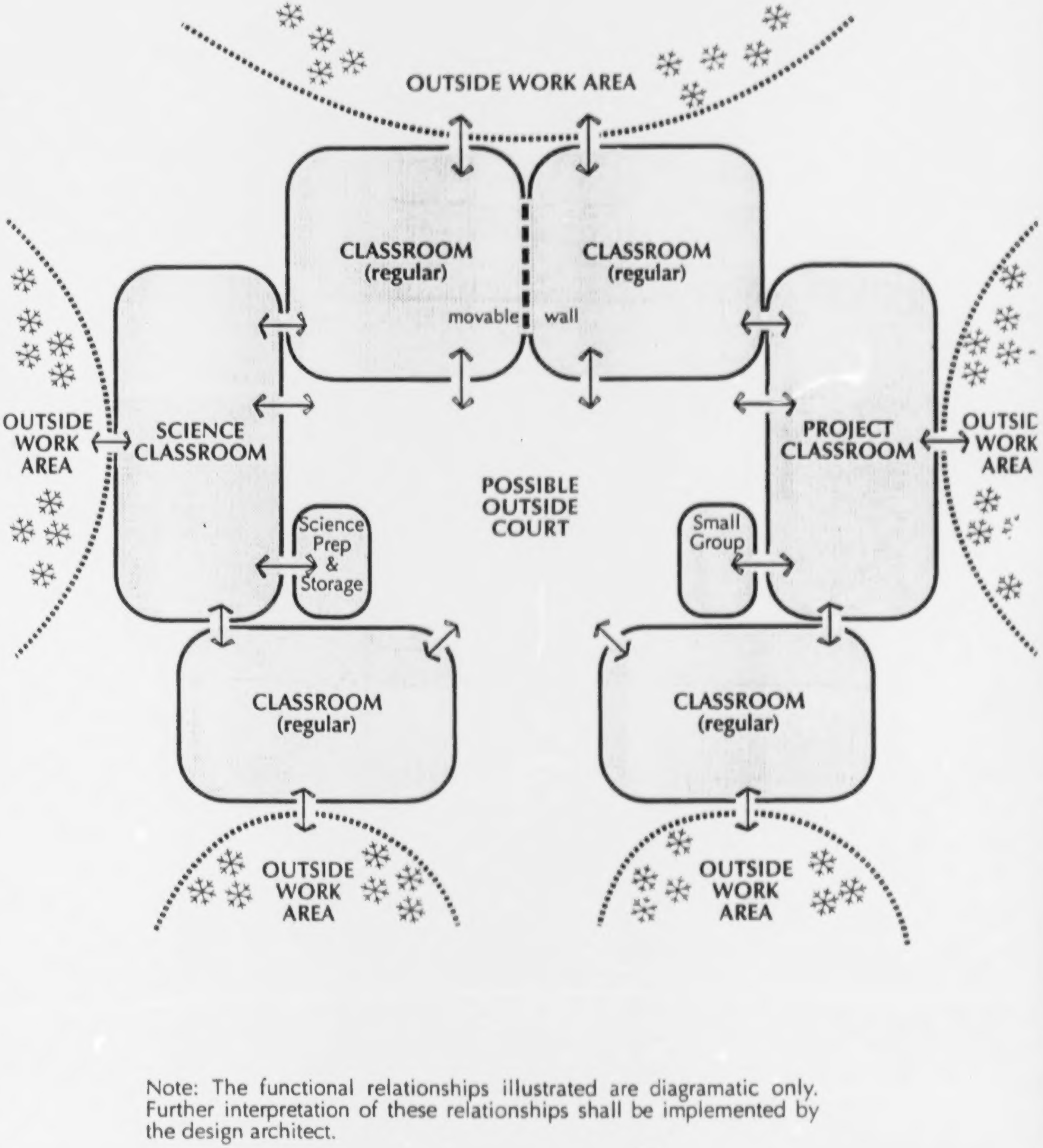
Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

ACADEMIC HOUSE PLAN


INSTRUCTIONAL CLUSTER
TEAM CLUSTER #2
HOUSE SUPPORT SPACES
INSTRUCTIONAL CLUSTER
TEAM CLUSTER #1
INSTRUCTIONAL CLUSTER
TEAM CLUSTER #3

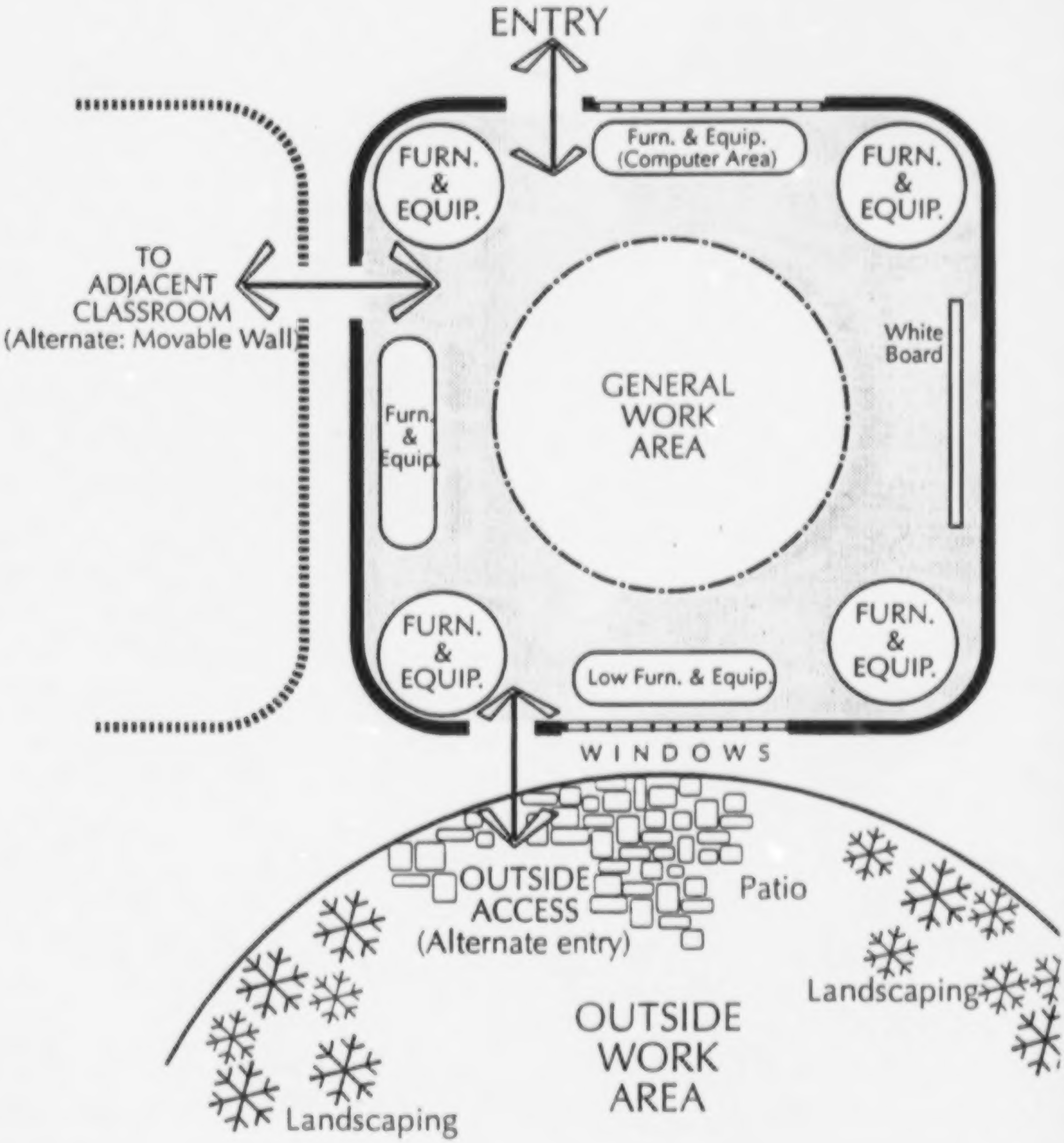
Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

INSTRUCTIONAL CLUSTERS
FUNCTIONAL RELATIONSHIPS


OUTSIDE WORK AREA
CLASSROOM (regular)
CLASSROOM (regular)
movable wall
OUTSIDE WORK AREA
SCIENCE CLASSROOM
PROJECT CLASSROOM
OUTSIC WORK AREA
POSSIBLE OUTSIDE COURT
Science Prep & Storage
Small Group
CLASSROOM (regular)
CLASSROOM (regular)
OUTSIDE WORK AREA
OUTSIDE WORK AREA

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

CLASSROOM
(REGULAR)
FUNCTIONAL RELATIONSHIPS


ENTRY
FURN. & EQUIP.
Furn. & Equip. (Computer Area)
FURN. & EQUIP.
TO ADJACENT CLASSROOM (Alternate: Movable Wall)
White Board
GENERAL WORK AREA
Furn. & Equip.
FURN. & EQUIP.
Low Furn. & Equip.
FURN. & EQUIP.
WINDOWS
OUTSIDE ACCESS (Alternate entry)
Patio
Landscaping
OUTSIDE WORK AREA
Landscaping

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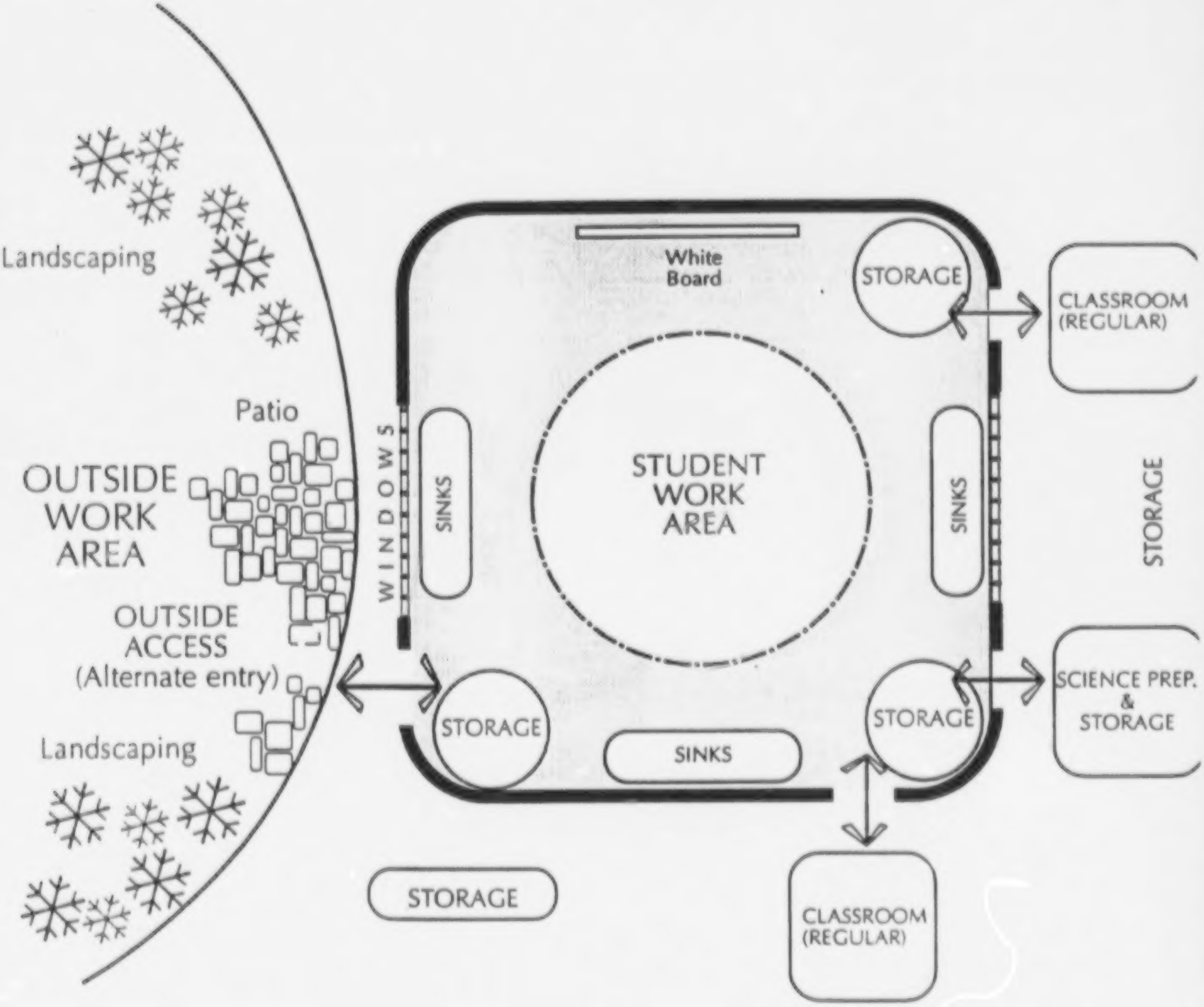
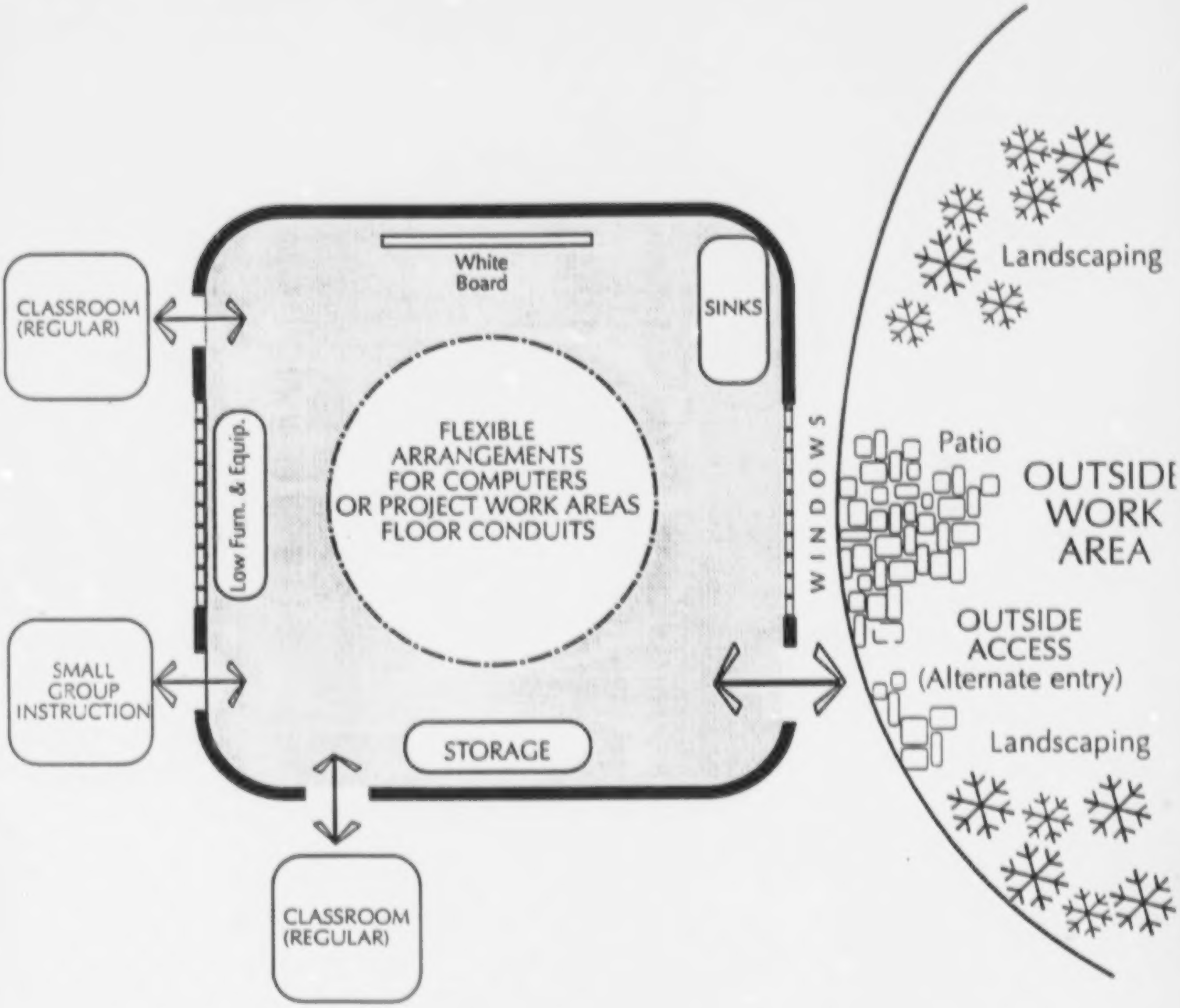
Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

CLASSROOM
(SCIENCE)


Landscaping
Patio
OUTSIDE WORK AREA
OUTSIDE ACCESS (Alternate entry)
Landscaping
WINDOWS
White Board
STORAGE
SINKS
STUDENT WORK AREA
SINKS
STORAGE
SINKS
STORAGE
CLASSROOM (REGULAR)
STORAGE
SCIENCE PREP. & STORAGE
STORAGE
CLASSROOM (REGULAR)

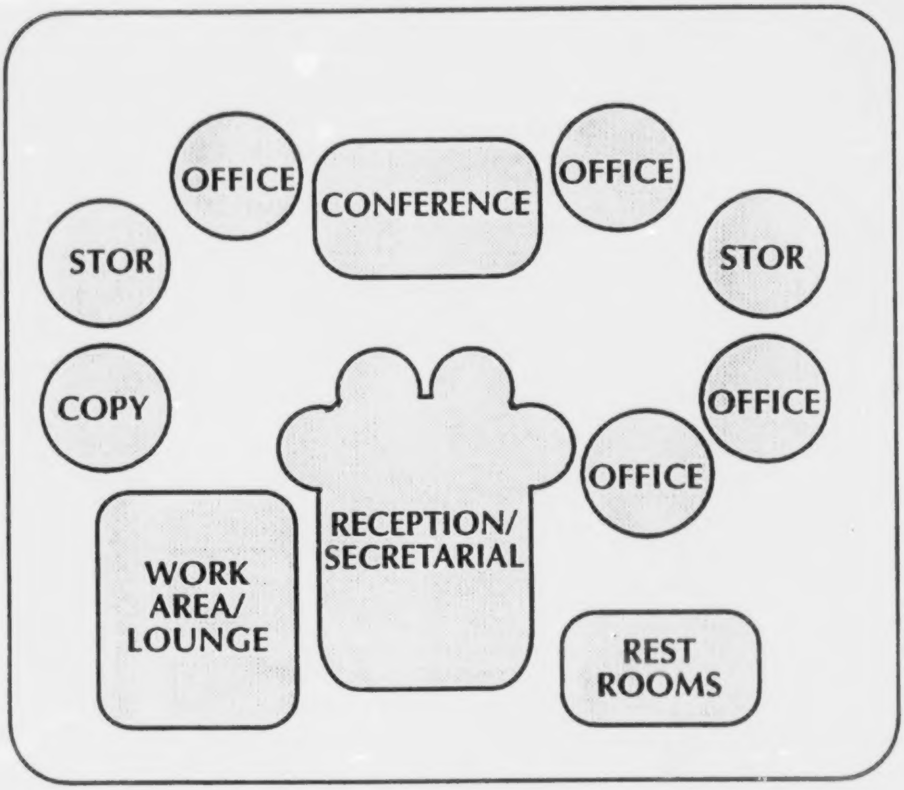
Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

CLASSROOM
(PROJECTS /TECHNOLOGY)


CLASSROOM (REGULAR)
White Board
SINKS
Landscaping
Low Furn. & Equip.
FLEXIBLE ARRANGEMENTS FOR COMPUTERS OR PROJECT WORK AREAS FLOOR CONDUITS
WINDOWS
Patio
OUTSIDE WORK AREA
OUTSIDE ACCESS (Alternate entry)
SMALL GROUP INSTRUCTION
STORAGE
Landscaping
CLASSROOM (REGULAR)

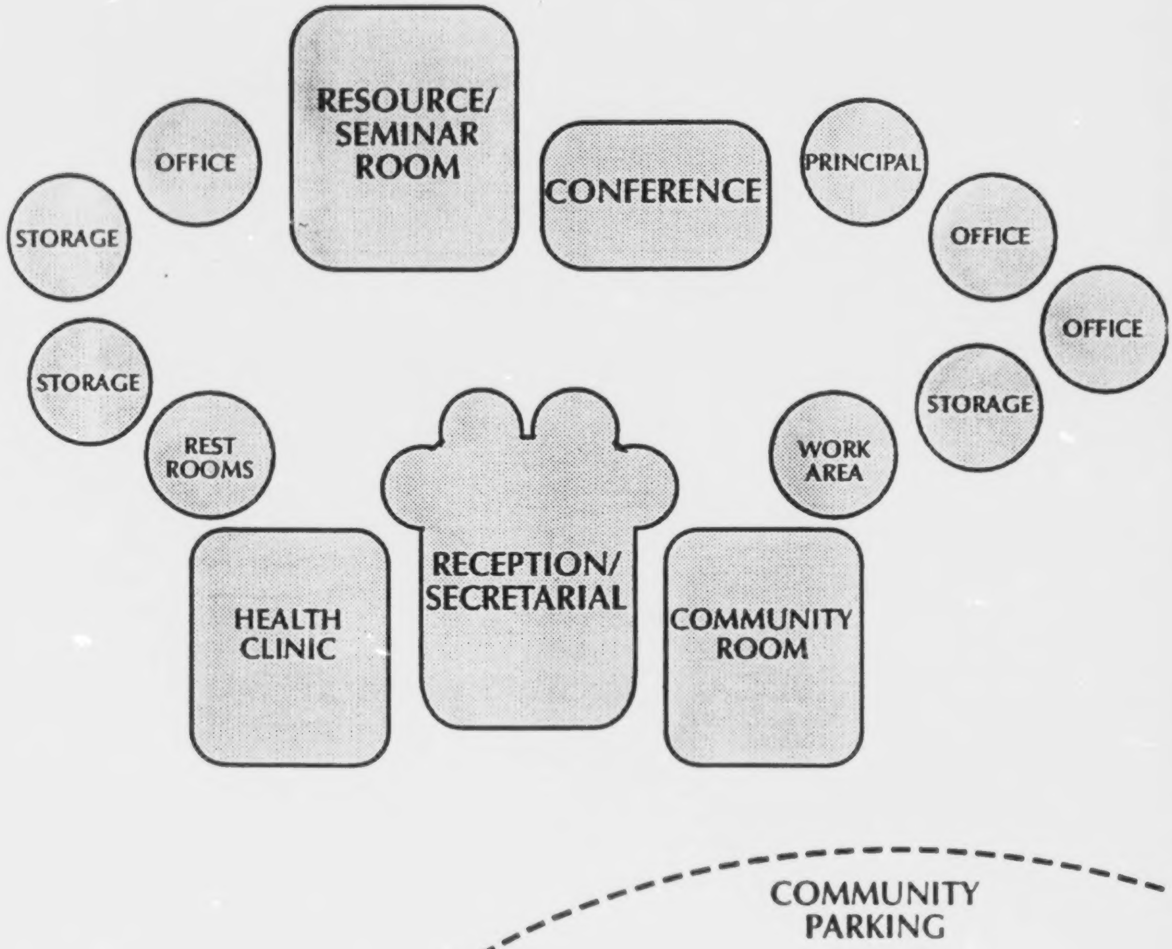
Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

HOUSE SUPPORT AREAS


OFFICE
CONFERENCE
OFFICE
STOR
STOR
COPY
OFFICE
OFFICE
RECEPTION/ SECRETARIAL
WORK AREA/ LOUNGE
REST ROOMS

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

BUILDING ADMINISTRATION


RESOURCE/ SEMINAR ROOM
OFFICE
STORAGE
CONFERENCE
PRINCIPAL
OFFICE
OFFICE
STORAGE
STORAGE
REST ROOMS
WORK AREA
RECEPTION/ SECRETARIAL
HEALTH CLINIC
COMMUNITY ROOM
COMMUNITY PARKING

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

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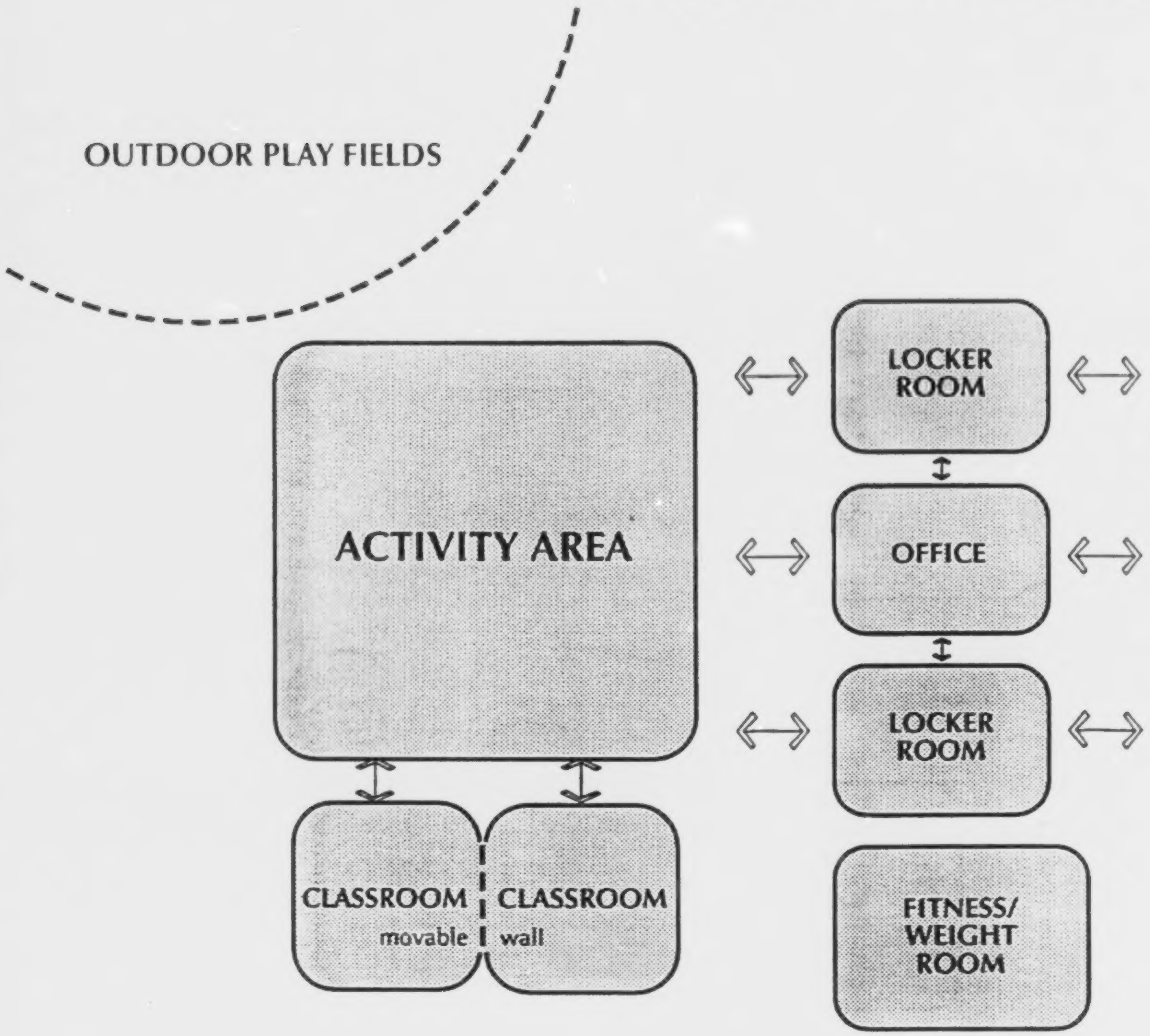
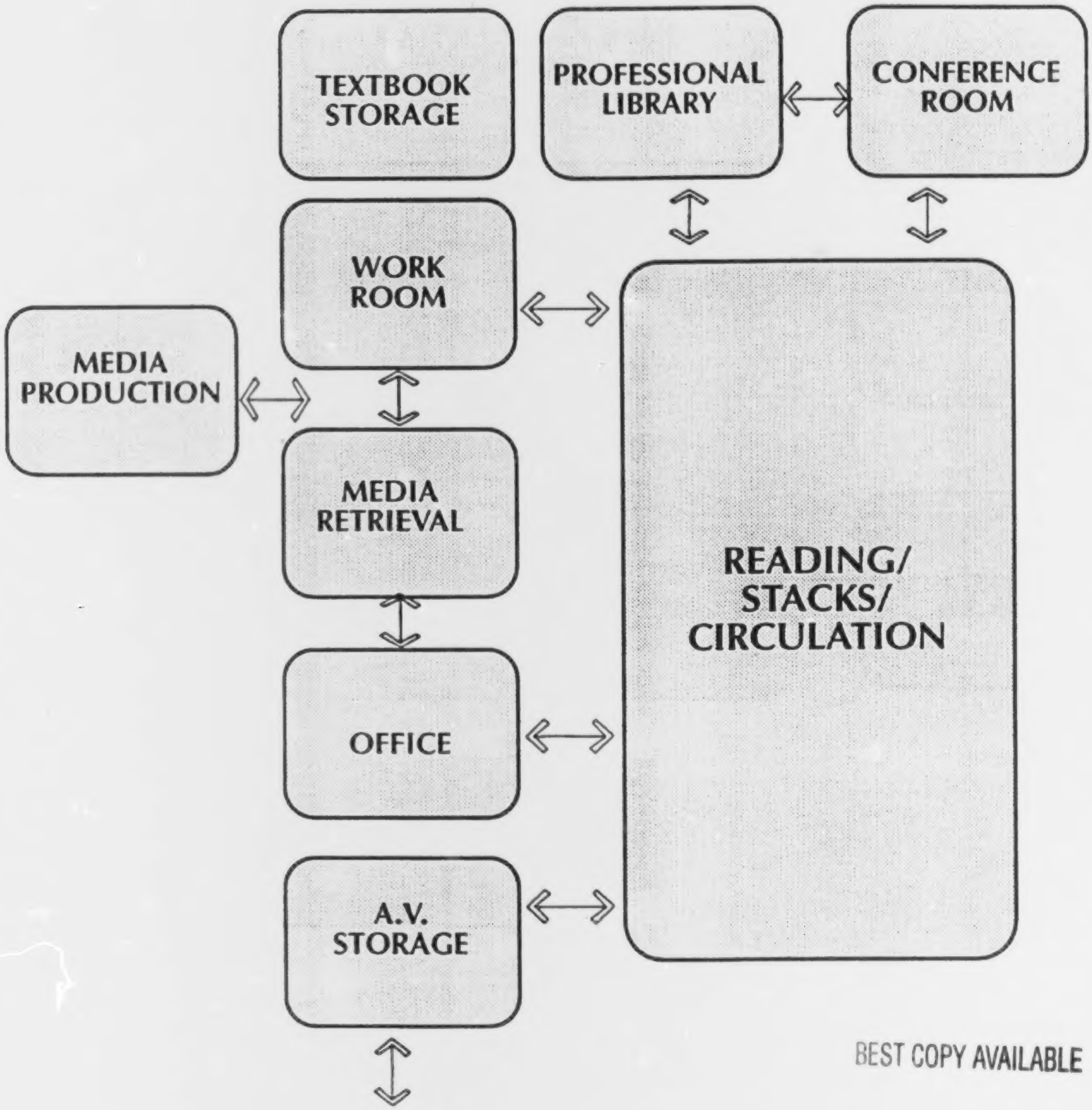
PHYSICAL EDUCATION


OUTDOOR PLAY FIELDS
ACTIVITY AREA
LOCKER ROOM
OFFICE
LOCKER ROOM
CLASSROOM
CLASSROOM
movable wall
FITNESS/ WEIGHT ROOM

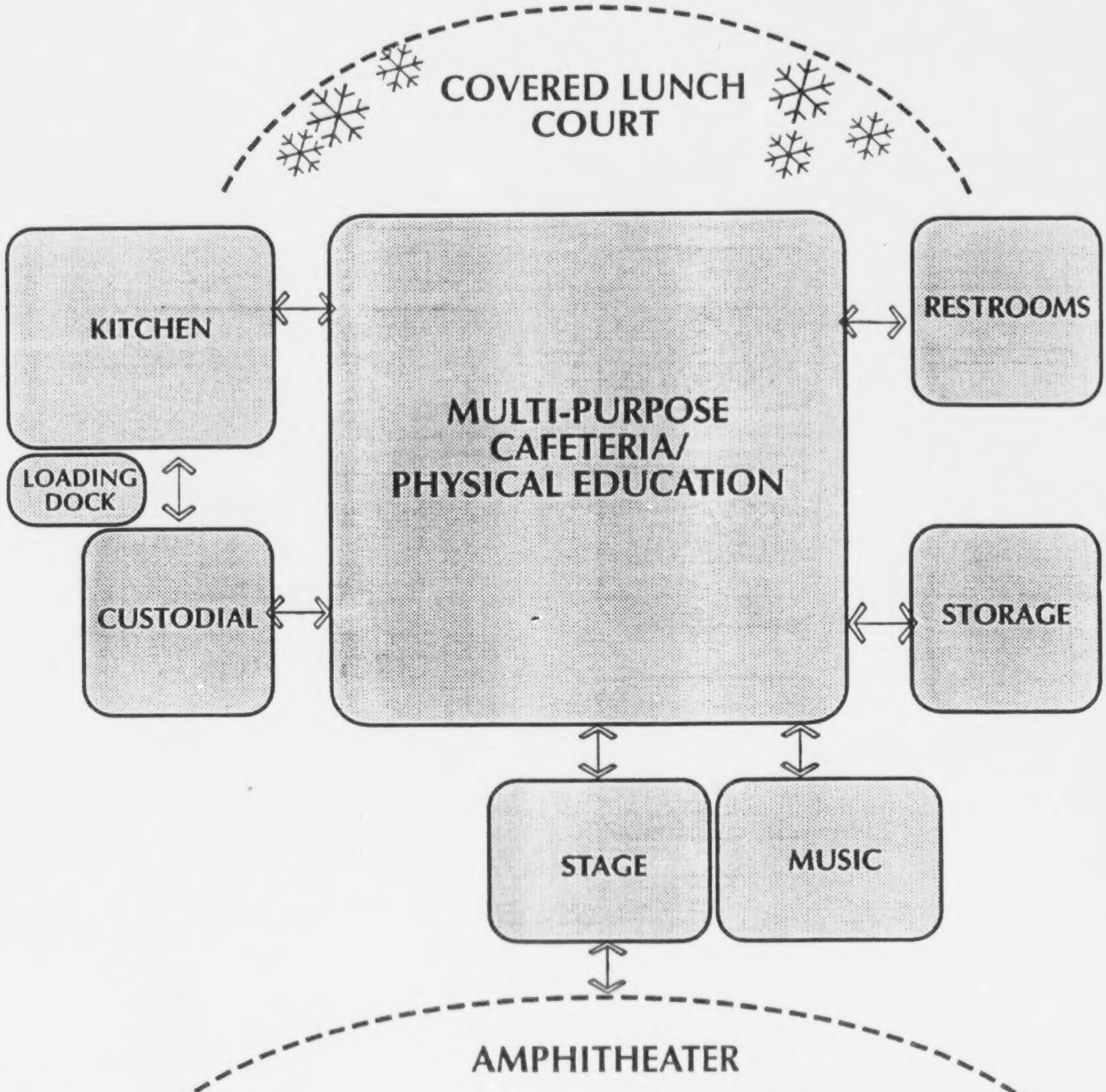
Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

LIBRARY / MEDIA CENTER


TEXTBOOK STORAGE
PROFESSIONAL LIBRARY
CONFERENCE ROOM
WORK ROOM
MEDIA PRODUCTION
MEDIA RETRIEVAL
READING/ STACKS/ CIRCULATION
OFFICE
A.V. STORAGE

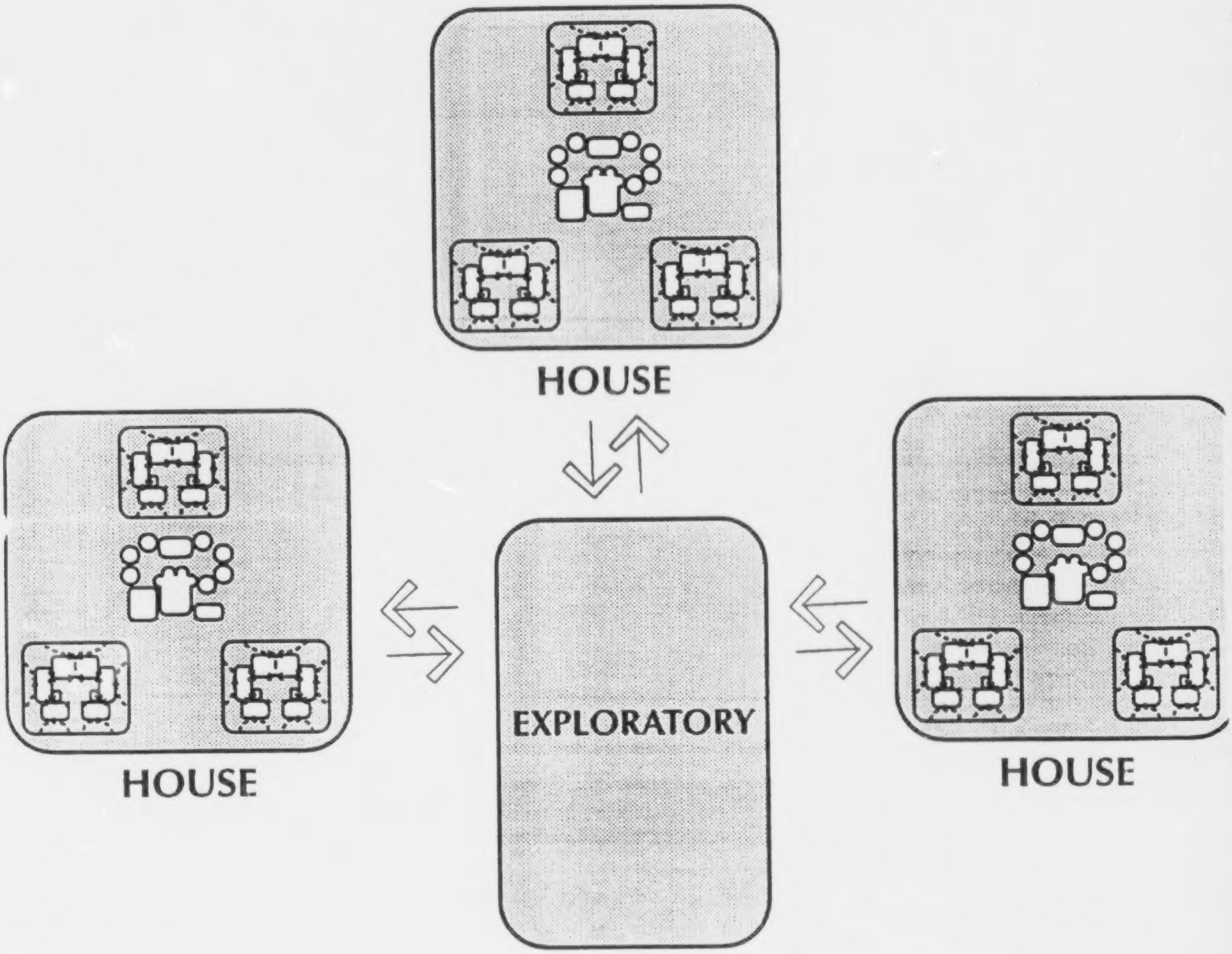
Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

CAFETERIA / PERFORMANCE AREA


COVERED LUNCH COURT
KITCHEN
LOADING DOCK
CUSTODIAL
MULTI-PURPOSE CAFETERIA/ PHYSICAL EDUCATION
RESTROOMS
STORAGE
STAGE
MUSIC
AMPHITHEATER

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

EXPLORATORY PROGRAMS


HOUSE
HOUSE
EXPLORATORY
HOUSE

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Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

IX. Summary of Space Requirements

The following summarizes the space requirements for a middle school of 1,500 students:

Program Area	# of Stations	Area	Total Area
Cluster			
Classroom [regular]	3-4	960	3,840
Classroom [science]	1	1,200	1,200
Classroom [technology]	1	1,200	1,200
Science Prep/Storage	1	150	150
Small Group Instruction Area	1	200	200
Total for Each Cluster			5,630-6,590

Program Area	# of Stations	Area	Total Area
House Support Area			
Offices	4	150	600
Reception/Secretarial	1	500	500
Conference Room	1	200	200
Storage	2	100	200
Staff Work Area	1	600	600
Copy/Production Room	1	200	200
Total Each House Support Area			2,300

Program Area	# of Stations	Area	Total Area
Building Administration			
Offices	1	200	200
Reception/Secretarial	3	150	450
Conference Room	1	500	500
Storage	1	250	250
Staff Lounge	1	150	150
Copy/Production Room	1	300	300
Community Room	1	200	200
Health Services	1	700	700
Resource/Seminar/Room	1	500	500
	1	700	700
Building Administration Area			3,950

Program Area	# of Stations	Area	Total Area
Physical Education			
Activity Area	1	4,000	4,000
Classrooms	2	960	1,920
Fitness/Weight room	1	1,500	1,500
P.E. Offices	2	300	600
Locker/Showers/Restrooms	2	2,500	5,000
Storage	1	500	500
Physical Education Area			13,520

Program Area	# of Stations	Area	Total Area
Library/Media Center			
Reading Room/Stacks/Circulation	1	5,500	5,500
Workroom	1	700	700
Media Production Room	1	700	700
Office Area	1	300	300
Small Group/Conference	1	500	500
Textbook Storage	1	400	400
A.V. Storage	1	300	300
Media Retrieval Center	1	500	500
Professional Library	1	400	400
Library/Media Center			9,300

Program Area	# of Stations	Area	Total Area
Cafeteria/Performance Space			
Large Group Area	1	5,000	5,000
Stage	1	1,500	1,500
Amphitheater	1	Outdoor	outdoor
Covered Eating Area [4000 X .33]	1	1,320	1,320
Storage	1	500	500
Kitchen	1	2,500	2,500
Custodial Work Area	1	1,000	1,000
Staff Dining Room	1	1,000	1,000
Cafeteria/Performance Area			12,820

Program Area	# of Stations	Area	Total Area
Exploratory Programs			
A. School-to-Work Transition			
Modular Work Station Area	1	2,400	2,400
Consumer & Family Science	1	2,400	2,400
Demo/Lecture Area	1	700	700
Power Tool Room	1	400	400
Audio/Video Room	1	400	400
Student Work Room	1	600	600
Computer Room	1	500	500
Storage	1	400	400
Outdoor Work Area	1	-	-
B. Band/Music Room	1	2,450	2,450
C. Art Room	1	1,700	1,700
Exploratory Area			11,950

Program Area	Total Area
Total Area	
Instructional Clusters	56,430
House Support Areas	6,900
Building Administration	3,950
Physical Education	13,520
Library/Media Center	9,300
Cafeteria/Performance Area	12,820
Exploratory Programs	11,950
Programmable Net Square Feet	114,870
Circulation/Mechanical/Restrooms/Canopies	17,130
Total Square Footage	132,000

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Part II

Note

The ***Hoover/Crawford Area Middle School Educational Specifications*** *is a companion document to the "****Future Middle Schools, San Diego Unified School District Educational Specifications.****" All information contained in the general specifications applies to this project unless otherwise noted.*

ACKNOWLEDGEMENTS

The DeJong & Associates, Inc. Planning Team wishes to extend our appreciation to the San Diego Unified School District Board of Education for commissioning this study. We would also like to thank the members of the Hoover/Crawford Task Force, staff, and community members in the City Heights area that have participated in the planning activities.

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Hoover/Crawford Middle School Educational Specifications

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Executive Summary

The new Hoover/Crawford middle school will serve approximately 1,500 students in grades 6-8 in a building of 132,000 square feet. The project was approved by the Board of Education on June 22, 1993 and will be completed in January, 1998. The site area consists of approximately thirteen [13] acres located in the City Heights neighborhood of San Diego.

The population of the City Heights neighborhood is predominantly Hispanic, with White, African-American, Asian, and other ethnic groups making up the remainder of the population in descending order. The predominantly Hispanic student population continues to increase rapidly, while the student population of other ethnic groups remains relatively constant.

Most people in the neighborhood rent rather than own their own homes, which are mostly single-family dwellings with housing values lower than San Diego norms. There is a high level of poverty among children [49%]. Most people are employed in construction, manufacturing, and retail with an unemployment rate of 8% in 1990. Scholastically, the students' California Assessment Program test scores in the area fall below the District average.

Perhaps because of these circumstances, the overall community desires for the new facility center around the idea of the school as a community center. In addition to serving all of the traditional needs of students, the facility should incorporate community needs such as child care, health clinics, a community-wide media center, and rooms for community meetings and events. References were also made in regard to the need for green space, community gardens, and places for performances, festivals , and other community events. Coordination between existing schools and the San Diego Parks department as well as social agencies would strengthen the integrating direction that was referenced in the community dialogues.

The ethnic diversity of the community provides a unique opportunity to develop themes in the building design that reflect the cultural richness of the Hoover/Crawford area community. The design may include building archetypes that honor the neighborhood's cultural diversity.

Another facet of the building design relates to the individual needs of each student. One of the emerging trends in educational curriculum and instruction is providing for the unique needs and interests of each student while increasing proficiency in core subjects. The building design's success hinges on its ability to accommodate these special needs or "learning styles" while also addressing the larger issues of function, cost, and neighborhood compatibility.

It has been determined through the programming process that an Academic House Plan would best meet the needs of the students and faculty. The plan calls for a house for each grade consisting of three clusters. Each cluster has six [6] regular and "special" classrooms, a science prep/storage area, and a small group instruction area. Each house has support facilities, and the three houses would share building-wide facilities including: Building Administration, Special Subject Areas, Physical Education, Library/Media Center, and Cafeteria/Performance Area. These facilities have the potential for serving the community-at-large as well.

The community that the Hoover/Crawford Area Middle School will serve has many of the same characteristics of urban communities not only in San Diego, but throughout America. The pressures of poverty, the erosion of community cohesion, and inadequate educational and community facility infrastructure are crucial issues that must be faced squarely. The Academic House Plan. with a focus on cultural diversity and community development through combining school and community resources, is step toward providing area residents with the resources they need to address these issues from a community-wide perspective.

A. Project Parameters

Size of Hoover/Crawford Area Middle School

The Hoover/Crawford Area Middle School will serve 1,500 students. Eighty-eight square feet per student is the recommended space allotment by the district under the guidelines of the State of California. The total required square footage for this building will be 132,000 square feet. The Hoover/Crawford Area Middle School is to serve grades 6-8.

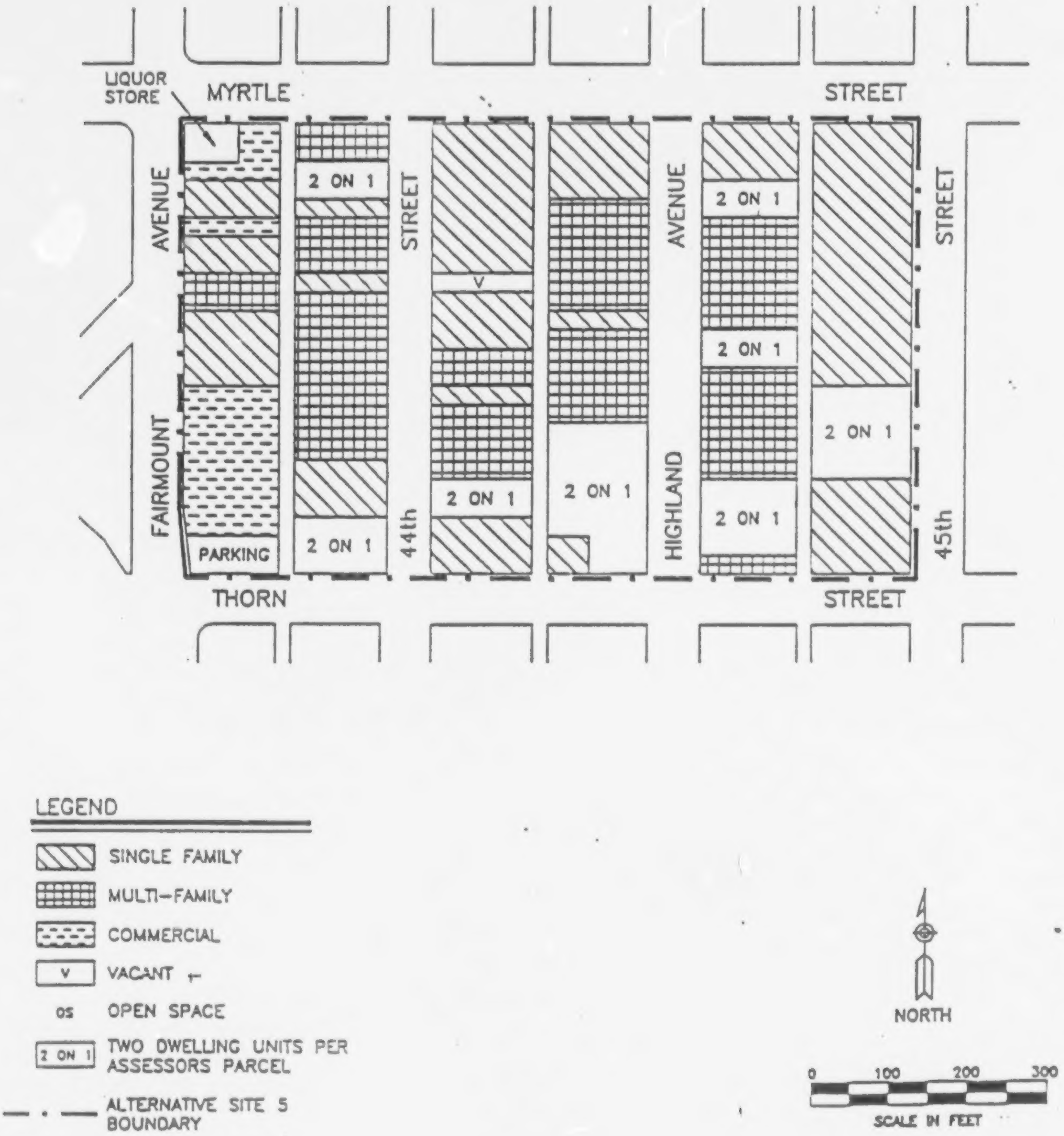
According to district guidelines, 20% of the classroom space is to be composed of portable classrooms [approximately ten portable classrooms]. Please note the portable space discussion in the general educational specifications document.

The timeline for completion of this project is as follows:

Board Approval/Land Acquisition Begins	June 22, 1993
Planning/Design Process	September, 1993
Design Completed	December, 1994
State Review Completed/Bidding Process Begins	October, 1995
Construction Begins	April, 1996
Project Completed	January, 1998

Site

The site for the new Hoover/Crawford Area Middle School consists of approximately thirteen acres of land within the City Heights neighborhood of the Mid-City Community Plan [see maps]. More specifically, the Hoover/Crawford Area Middle School site is bounded on by Myrtle Avenue, Thorn Street, 45th Street, and Fairmount Avenue. The San Diego Unified School District is in the process of acquiring 89 parcels of land or approximately three city blocks of land for the school site.


LIQUOR STORE
MYRTLE
STREET
FAIRMOUNT AVENUE
44th STREET
HIGHLAND AVENUE
45th STREET
THORN
STREET
PARKING
2 ON 1
V
LEGEND
SINGLE FAMILY
MULTI-FAMILY
COMMERCIAL
VACANT
OS OPEN SPACE
2 ON 1 TWO DWELLING UNITS PER ASSESSORS PARCEL
ALTERNATIVE SITE 5 BOUNDARY
NORTH
0 100 200 300
SCALE IN FEET

B. Population Characteristics

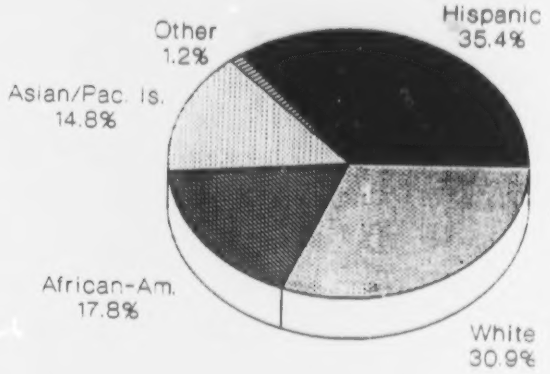
The information in this section of the report has been included to provide a general understanding of the students and community to be served.

It is projected that the students who will attend the new Hoover/Crawford Area Middle School reside in the attendance areas currently served by Wilson and Mann middle schools.

To provide an overview of the population characteristics of the area to be served, information was taken from the 1990 Federal Census [tracts 24, 25.01, 25.02 and 26.0]. Even though these tracts do not totally align with the new Hoover/Crawford Middle School planning area, they do provide a general overview of the community. Since the population in this area has changed rapidly in the past three years, the official 1990 Census data may not be completely accurate.

Ethnic Distribution

According to the 1990 Census of Population and Housing, the area includes large populations from five major ethnic groups. Approximately 35% of the people living near the new school are Hispanic, and 64.6% of the people are White, African-American, Asian/Pacific Islanders, and from "other" ethnic groups.



72

Age

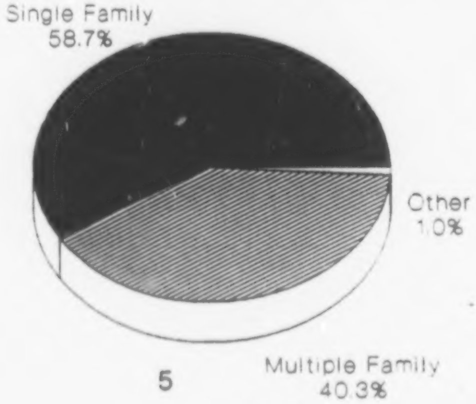
Less than 18% of the people residing in the surrounding community are over 45. There is a large percentage of preschool-aged youngsters [10%] and younger adults that are between 18 and 34 years old [33.6%].

Age Distribution Hoover/Crawford Area

Age	Percent
0 - 4	10.0%
5 - 13	16.0
14 - 17	5.3
18 - 24	12.8
25 - 34	20.8
35 - 44	13.8
45 - 59	8.3
60 - 64	2.3
65 - 74	4.3
75+	3.0

Housing

Approximately 59% of the people living in the Hoover/Crawford Area Middle School neighborhoods live in single-family housing units, while 40.3% live in multiple-family housing. Approximately 1% live in mobile homes or "other" types of housing, according to the 1990 Census report.



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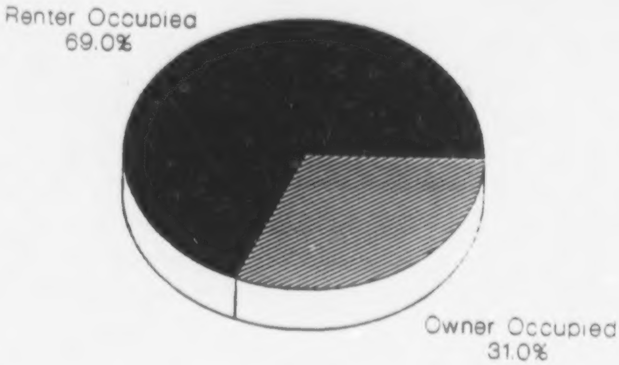
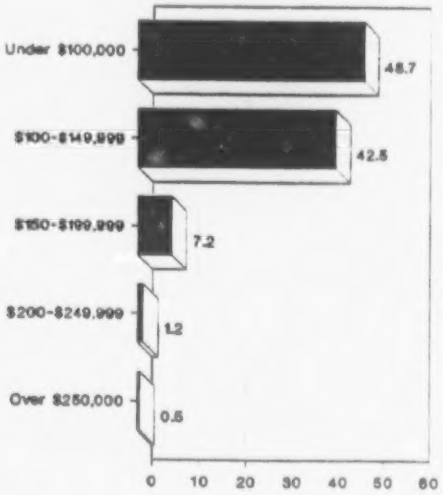
The majority [69%] of the people living in this community are renters. Only 31% own their homes.



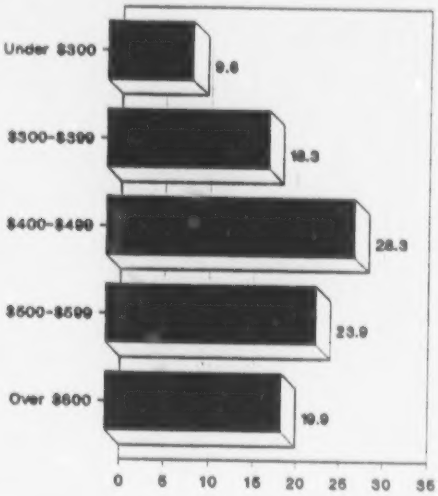
Housing Values

The housing value in the Hoover/Crawford Area Middle School neighborhood is relatively low compared to other San Diego communities. Approximately 91.2% of the owner-occupied homes are valued at less than $150,000.



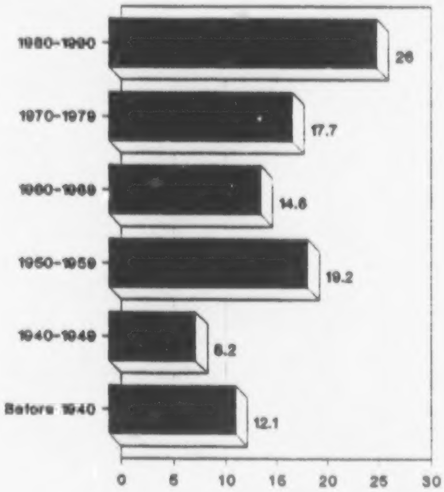
Rental Rates

Rents in the area are also lower than average in the city. About 9.6% of the people pay less than $300 rent per month. Another 18.3% pay between $300 and $400 monthly, while 28.3% pay between $400 and $500 rent per month. Roughly 20% of the people renting in this area pay more than $600 per month.



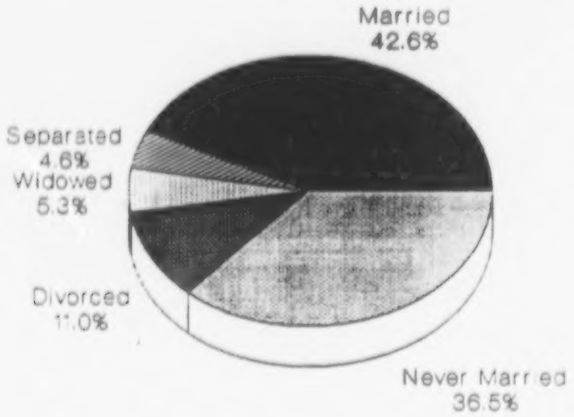
Age of Housing

Approximately 54.2% of the housing units in the Hoover/Crawford Area Middle School neighborhoods were built before 1970. The highest percentage of houses [26%] was built between 1970 and 1979.



Marital Status

According to the 1990 Census report, most [57.4%] of the residents [ages 15 and above], who live in the community, are not married. Roughly 16% of the adults living in this area are either separated or divorced, and 5.3% are widowed. About 42.6% of the residents live with their spouse.

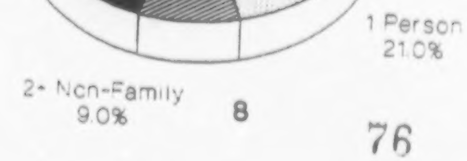


Household Size

The household size of 3.2 persons per household in this community is higher than that of the national average of 2.4. However, 20.9% of all households have only one resident.

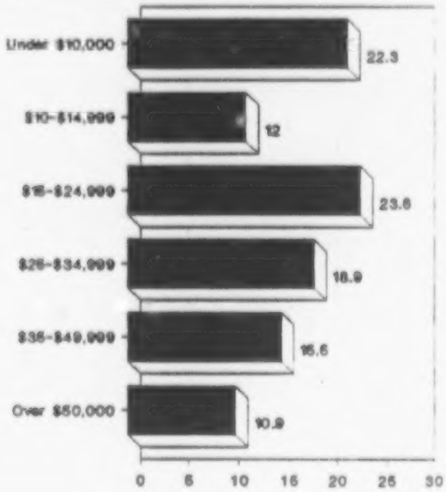
Types of Households

In the Hoover/Crawford Middle School area, approximately 70% of the households consist of families. According to the 1990 Census report, 18.1% of the family households are headed by unmarried women. Another 9% of the households in this area are considered "non-family"; people who live together, but are not part of the same family.



Household Income

According to the 1990 Census report, 57.9% of the households in the Hoover/Crawford Middle School neighborhoods earn less than $25,000 per year, and less than 11% of households earn a yearly income of $50,000 or more.



Poverty Status

The 1990 Census report indicates that 29.1% of the people living in the Hoover/Crawford Middle Schcol area live in poverty. Approximately 41.9% of the children between the ages of 1 and 17 live in poverty as well.

Employment

About 55% of the people living in the Hoover/Crawford Middle School neighborhoods work in the following industries: construction, manufacturing [durable goods], retail trade, business and repair services, and health services. The largest group [roughly 19%] work in retail trade, according to the report. Most of those who are employed work in service-related jobs. The following are the industries where people are most likely to be employed:

Employment Types

Industry	Percent
Construction	9.0%
Manufacturing	12.6
Retail Trade	18.9
Business & Repair	7.4
Health Services	7.4

Unemployment

According to the 1990 Census report, about 8% of the people who were in the labor force are unemployed at the time the Census was being taken. The Census information also indicates that an additional 37.5% of the people over the age of 16 were not in the labor force at all. Some of these people may have been students, homemakers, or retired people. Roughly 46% of the population over the age of 16 were not employed. [These figures may not accurately reflect current conditions.]

Educational Levels

The level of education attained by people living in the new school area and who are over the age of 25 is as follows: 19% have less than a 9th grade education, 26.2% have graduated from high school, 21.8% have had some college, 6.3% have earned bachelor's degrees, and 2.5% have earned graduate or professional degrees.

C. Student Information

The majority of the students who will be attending the new Hoover/Crawford Area Middle School will come from the areas of Mann and Wilson middle schools. Even though the exact attendance boundaries for the new school have not yet been determined, information gathered from the surrounding schools provide an understanding of the needs of the students likely to attend the new school.

Ethnic Background

San Diego County is highly ethnically diverse and multi-cultural. The Hispanic population is the largest and fastest growing segment of the city's population. Consequently, the number of Hispanic children in the city's schools is also growing.

According to the district's ethnic census, eight different ethnicities are represented in the city schools today. They include: Hispanic, White, African-American, Pacific Islander, Filipino, Indochinese, and Native American.

The following information was received from the San Diego Unified School District and is based on the 1992-93 school year enrollment figures:

Ethnic Groups at Mann & Wilson Middle Schools

Ethnicity	Mann	Wilson
Hispanic	27.4%	39.3%
White	17.9	11.9
African-American	23.3	22.5
Asian	1.2	1.6
Pacific Islander	0.2	0.6
Filipino	1.5	0.8
Indochinese	28.0	22.9
Native American	0.4	0.4

At Mann Middle School, the Indochinese and Hispanic students are the largest ethnic groups. The percentage of African-American students has remained almost stable since the 1987-88 school year. During the same period, the percentage of White students has dropped from 29.3 to 17.9 percent. The Asian population has fluctuated through the years, but remains near 1 percent.

At Wilson Middle School, the largest group of students is Hispanic. During the last six school years, the percentage of Hispanic students has increased from 26.1 to 39.3 percent. The second largest group is the Indochinese students, although this percentage has decreased by over 3% during the last six years. Likewise, the percentage of White students has dropped from 22.3 to 11.9 percent. During the same time period, the percentage of African-American students has remained relatively constant.

Student Mobility

There is a great deal of movement of students in and out of the neighborhood areas. The San Diego Unified School District describes "percent stable" as the percentage of students who begin and end the school year in the same school building. The mobility index calculates the relationship between the number of students who move in and out of the area and the total enrollment.

	Mann	Wilson
Percent Stable	83.8%	76.4%
Mobility Index	53.7	80.9

Free and Reduced Lunches

The federally funded free and reduced price meal program serves students who come from lower income families. The middle schools in this area have some of the highest percentages of students who are eligible to receive free or reduced lunches in the school district. The following table shows the percentage of students who were eligible in May 1993:

	Mann	Wilson
Free/Reduced Priced Lunches	80.0%	90.1%

California Assessment Program [CAP]

The last year that the California Assessment Program [CAP] test was given to students in the sixth grade was 1990. However, in 1992 the CAP test was given to eighth grade students. Even though these test scores are not the only indicator of how well students are performing, they do reflect comparisons with the surrounding schools. Most of the scores fall below the District average.

California Assessment Program Scores - Grade 6

Subject Area	Mann	Wilson	District
Reading	242	213	262
Written Language	264	240	281
Mathematics	267	228	274

The 1992 CAP scores at the eighth grade level also included History, Science, and other specific skill areas in addition to Reading, Written Language, and Mathematics scores. Most of these scores also fall below the District average.

California Assessment Program Scores - Grade 8

Subject Area	Mann	Wilson	District
Reading	232	188	246
Writing Assessment	243	205	251
Mathematics	274	229	279
History	232	200	253
Science	247	212	264

Student Needs

Based on demographics and student profiles of neighboring schools, it is projected that students who attend the new Hoover/Crawford Area Middle School will likely need:

- Intensive language acquisition programs.
- Breakfast and lunch programs.
- Tutorial and remedial assistance.
- A wide variety of counseling and intervention programs.
- Access to health and nutrition services.
- Access to special education programs, psychologists, social workers, and other specialists.
- Adult mentors and advisors.
- Experientially-based and academically challenging programs.
- Student performance and administrative management to address the high turnover of students.
- Small group areas to facilitate conferencing.
- Extensive parent and community participation.

D. Community Expectations

Two community dialogues, a local educational specifications work session, and a number of local site task force meetings were conducted in the City Heights area to gain community input for the planning of the new middle school.

Persons involved in the planning of the new middle school expressed strong desire that the new school serve as a focal point for education in the community and as a catalyst for community development, stabilization, and overall improvement of public services, local businesses, and area homes/apartments.

Theme

An "international" theme is proposed as a result of the many countries that are represented by residents of the City Heights neighborhoods. This theme might serve as an architectural metaphor in the design of the building.

Community Uses

Strong interest has been expressed for this school to have the ability to serve both school and community functions during the school day, but especially during non-school hours.

Repeatedly, persons have indicated that students in this area come from a variety of ethnic backgrounds [see population and student characteristics] with a wide range of educational, social, and economic needs. These factors will provide a significant challenge in meeting student educational needs and formulating partnerships with other public, private, and non-profit agencies to address additional student needs and the needs of the broader community.

Indoor Areas

Specifically, the following indoor spaces have been identified as priorities for community use and access:

- Community/Parent Room
- Library/Media Center
- Health Center
- Multi-Purpose/Performance Area

In the specifications to follow, emphasis has been placed on these areas.

The architect should take special note of these areas to ensure that the layout and design facilitate community use and access.

The community has also expressed a strong interest in having access to classrooms, computer labs, conference rooms, and other meeting areas during non-school hours for adult education and community meetings.

Some interest has been expressed by San Diego State University in collaborating with the school district to implement a professional development center at the middle school. This possible area of collaboration will require follow-up meetings.

Residents and community leaders have also requested that exploration occur for making the middle school a satellite center for the community college.

Outdoor Areas

The following outdoor areas have been identified as priorities:

- Soccer Field[s]
- Baseball/Softball Fields
- Garden Area
- Basketball & Hard Courts

It is proposed that the outdoor facilities be structured to serve primarily early adolescent and adult uses. Since the district is also constructing an elementary school and planning joint use at the City Heights Park in cooperation with the City of San Diego two blocks to the north of the middle school site, it is suggested that the elementary school/park be equipped to focus on younger children and the middle school on older children.

The outdoor facilities may be viewed as three areas: fields [soccer, ball fields, track], hard court surfaces, and a garden to be used for both instructional and community purposes. The building should be constructed in a manner that maximizes opportunities for outdoor space since outdoor areas will also need to serve as multiple teaching stations for physical education.

The community has stated interest and concern regarding parking, bicycles, and vehicular and pedestrian vehicular traffic flow.

There is strong community interest in greenery, flowers, trees, shrubs, and other landscaping. The community also expressed an interest in helping maintain some of this greenspace.

Master Planning Concepts

Through community input, suggestions have been made that the building and site be master-planned to provide for future daycare services, that the library/media center become a public library, and the health service area should have the capability to expand into a multi-agency center for social services. The master plan should also include a logical process for expanding facilities on the site to accommodate an additional 250 students if the need arises.

Security

A primary concern has been expressed regarding safety and security. All statements found in the general educational specifications apply.

A specific issue has been raised regarding traffic patterns, the nature of businesses, noise, and the busyness of Fairmount Avenue. The site and building design will need to allow for clear separation of activities with an appropriate buffer zone between the school and Fairmount Avenue. There were no specific recommendations in how this issue might be addressed. It is suggested that this issue be discussed during the site charette meetings.

Drugs, violence, and other forms of crime have all been identified as areas of concern. The programming concepts of dividing students into "houses" and the spatial relationships identified later in this document were determined specifically to enhance supervision and circulation of students and staff.

From a student's perspective, many of the safety and security issues have more to do with arriving and leaving school rather than on the school grounds. The community has expressed an interest in various types of community involvement activities to assist in addressing the problem. However, strong interest was expressed in maintaining a police neighborhood center in proximity to the new middle school.

Suggestions have also been made to route vehicular traffic around the site by converting one or more streets to one-way streets. City traffic engineers may prove helpful in these issues.

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Neighboring Schools and Services

The district is currently planning a new elementary school two blocks to the north that is to become a park/school complex. The district also operates Hamilton Elementary School approximately two blocks to the south. To some extent these projects should be master-planned jointly to serve the needs of children and families in the neighborhood. For both the new elementary school and new middle school, suggestions have been made to have gardens, a swimming pool, soccer fields, softball/ baseball fields, community theater, adult education, social services, public library, picnic areas and extensive community use of facilities and grounds.

Since the middle school is proposed to have large meeting rooms, an outdoor amphitheater, physical education spaces that are more suitable for adult use, and more "adult type" furniture, it is suggested that this school meet more of the adult needs of the community. The new elementary school would then be developed to meet more of the younger child's needs.

There are some activities suggested at the community dialogue meetings that are clearly out of the budget constraints for the district such as a swimming pool. Serious consideration should be given to this need as part of the park complex.

A suggestion has also been forwarded to develop a linear park between the new elementary school/park and the middle school. This park might be created by closing one of the streets and converting it into a pedestrian area. It is envisioned that such a concept would foster greater community redevelopment and avoid duplication of green spaces between the two sites. This concept should receive further study.

By encouraging the development of recreational and leisure activities for young children at the new elementary school and park and the development of adolescent activities at the middle school and green spaces tying the two together, the entire area might be zoned appropriately to meet student and community needs and avoid conflicting and duplicate activities.

Building Aesthetics

The community had no specific suggestions for building aesthetics except to say that the atmosphere should be inviting, non-institutional in character, and a place of which the community could be proud. Some participants indicated that it should not "look like a school" followed by strong statements that the new middle school should be a community facility. Some discussion about the look and feel of the new facility included references to the strong ethnic diversity of the neighborhood and the opportunity to incorporate familiar references to every culture somewhere in the building design.

E. Square Foot Summary

The following summarizes the space requirements for a middle school of 1,500 students:

I. Academic House Plan

Program Area	# of Stations	Area	Total Area
I.A. Cluster			
1. Classroom [regular]	3-4	960	3,840
2. Classroom [science]	1	1,200	1,200
3. Classroom [technology]	1	1,200	1,200
4. Science Prep/Storage	1	150	150
5. Small Group Instruction Area	1	200	200
Total for Each Cluster			5,630 - 6,590
Three Clusters per House			18,810
Three Houses			56,430

Program Area	# of Stations	Area	Total Area
II. House Support Area			
1. Offices	4	150	600
2. Reception/Secretarial	1	500	500
3. Conference Room	1	200	200
4. Storage	2	100	200
5. Staff Work Area	1	600	600
6. Copy/Production Room	1	200	200
Total Each House Support Area			2,300
Three Houses			6,900

Note: Each house will have 17 total classrooms, which means that two of the clusters will have 6 classrooms and one cluster will have 5 classrooms. Each house will serve approximately 510 students [17 classrooms x 30 = 510]. The total number of regular classrooms would be 51 plus school-to-work transition, art, music, and physical education classrooms.

Program Area	# of Stations	Area	Total Area
III. Building Administration			
1. Offices	4	150-200	650
2. Reception/Secretarial	1	500	500
3. Conference Room	1	250	250
4. Storage	1	150	150
5. Staff Lounge	1	300	300
6. Copy/Production Room	1	200	200
7. Community Room	1	700	700
8. Health Services	1	500	500
9. Resource/Seminar/Room	1	700	700
Building Administration Area			3,950

Space	Quantity	Sq. Ft.	Total Area
IV. A. School-to-Work Transition Center			
1. Modular Work Station Area	1	2,400	2,400
2. Consumer & Family Science	1	2,400	2,400
3. Demo/Lecture Area	1	700	700
4. Power Tool Room	1	400	400
5. Audio/Video Room	1	400	400
6. Student Work Room	1	600	600
7. Computer Room	1	500	500
8. Storage	1	400	400
9. Outdoor Work Area	1	-	-
B. Band/Music Room	1	2,450	2,450
C. Art Room	1	1,700	1,700
Exploratory Programs			11,950

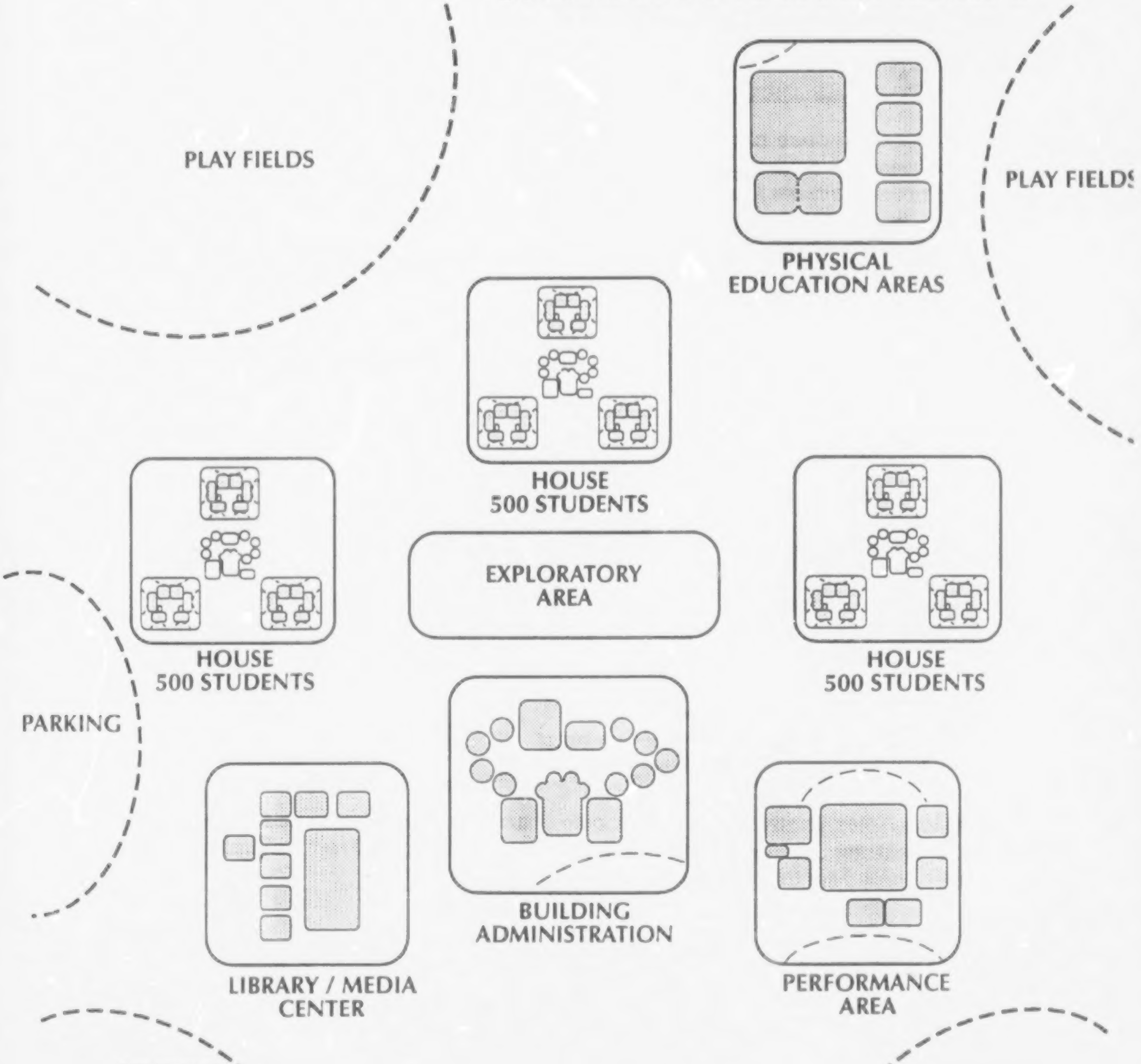
Program Area	# of Stations	Area	Total Area
V. Physical Education			
1. Activity Area	1	3,000	3,000
2. Classrooms	2	960	1,920
3. Fitness/Weight room	1	1,500	1,500
4. P.E. Offices	2	400	800
5. Locker/Showers/Restrooms	2	2,900	5,800
6. Storage	1	500	500
Physical Education Area			13,520

Program Area	# of Stations	Area	Total Area
VI. Library/Media Center			
1. Reading Room/Stacks/ Circulation	1	5,500	5,500
2. Workroom	1	700	700
3. Media Production Room	1	700	700
4. Office Area	1	300	300
5. Small Group/Conference	1	500	500
6. Textbook Storage	1	400	400
7. A.V. Storage	1	300	300
8. Media Retrieval Center	1	500	500
9. Professional Library	1	400	400
Library/Media Center			9,300

Program Area	# of Stations	Area	Total Area
VII. Cafeteria/Performance Space			
1. Large Group Area	1	5,000	5,000
2. Stage	1	1,500	1,500
3. Amphitheater	1	Outdoor	outdoor
4. Covered Eating Area [4000 X .33]	1	1,320	1,320
5. Storage	1	500	500
6. Kitchen	1	2,500	2,500
7. Custodial Work Area	1	1,000	1,000
8. Staff Dining Room	1	1,000	1,000
Cafeteria/Performance Area			12,820

Program Area	Total Area
Total Area	
I. Instructional Clusters	56,430
II. House Support Areas	6,900
III. Building Administration	3,950
IV. Exploratory Areas	11,950
V. Physical Education	13,520
VI. Library/Media Center	9,300
VII. Cafeteria/Performance Area	12,820
Programmable Net Square Feet	114,870
VIII. Circulation/Mechanical/Restrooms/Canopies	17,130
Total Square Footage	132,000

MIDDLE SCHOOL SPATIAL RELATIONSHIPS


PLAY FIELDS
PLAY FIELDS
PHYSICAL EDUCATION AREAS
HOUSE 500 STUDENTS
HOUSE 500 STUDENTS
HOUSE 500 STUDENTS
EXPLORATORY AREA
PARKING
BUILDING ADMINISTRATION
LIBRARY / MEDIA CENTER
PERFORMANCE AREA
STUDENT DROP-OFF
PARKING

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

F. Detailed Project Program

I. Academic House Plan

The academic house plan divides a large middle school for 1,500 students into three schools within a school. Each school within a school is called a house. Each house supports the primary academic program and administrative support areas for approximately 500 students.

To maximize flexibility and site-based decision-making, each house should be able to:

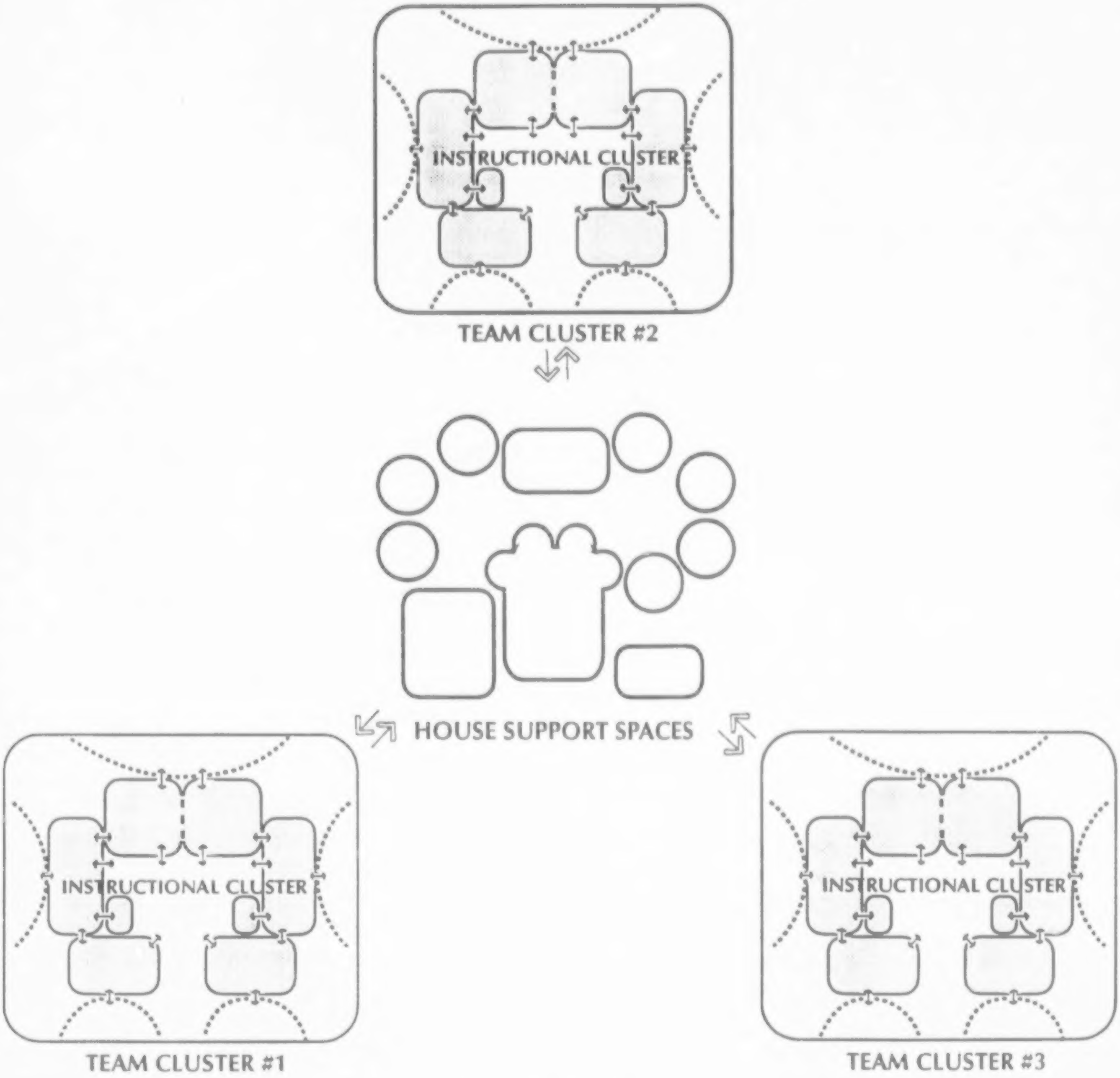
- Support a Grade Level Configuration: One house for sixth grade, one house for seventh grade, and one house for eighth grade.
- School within a School: Each house would be a school for grades 6-8.
- Departmental Instruction: Academic classrooms would support a departmental approach to instruction.

Each house will contain:

- classrooms
- science rooms
- project areas
- small group instructional areas
- teacher preparation
- administrative & support areas

Athletic facilities, library/media center, cafeteria/multi-purpose area, specialized areas [art, music, and school-to-work transition], and overall building administration would be spaces shared by the three houses.

ACADEMIC HOUSE PLAN


INSTRUCTIONAL CLUSTER
TEAM CLUSTER #2
HOUSE SUPPORT SPACES
INSTRUCTIONAL CLUSTER
TEAM CLUSTER #1
INSTRUCTIONAL CLUSTER
TEAM CLUSTER #3

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

I. A. Instructional Clusters

Each house will contain three instructional clusters. Each cluster will support approximately 150-180 students.

The three instructional clusters within a house, determined by site-based decisions can be organized to serve the same grade level, to serve a different grade level [one 6th grade, one 7th grade, and one 8th grade], or to support a departmental approach.

The classroom spaces in the cluster need to have the flexibility to support the following educational programs:

- Science
- Language Arts
- Mathematics
- Social Studies
- Bi-lingual Instruction
- World Languages
- Special Education
- Gifted and Talented Education
- Health Education

It is envisioned that the cluster will contain six classrooms.

- 4 classrooms [regular]
- 1 classroom [science]
- 1 classroom [technology emphasis]

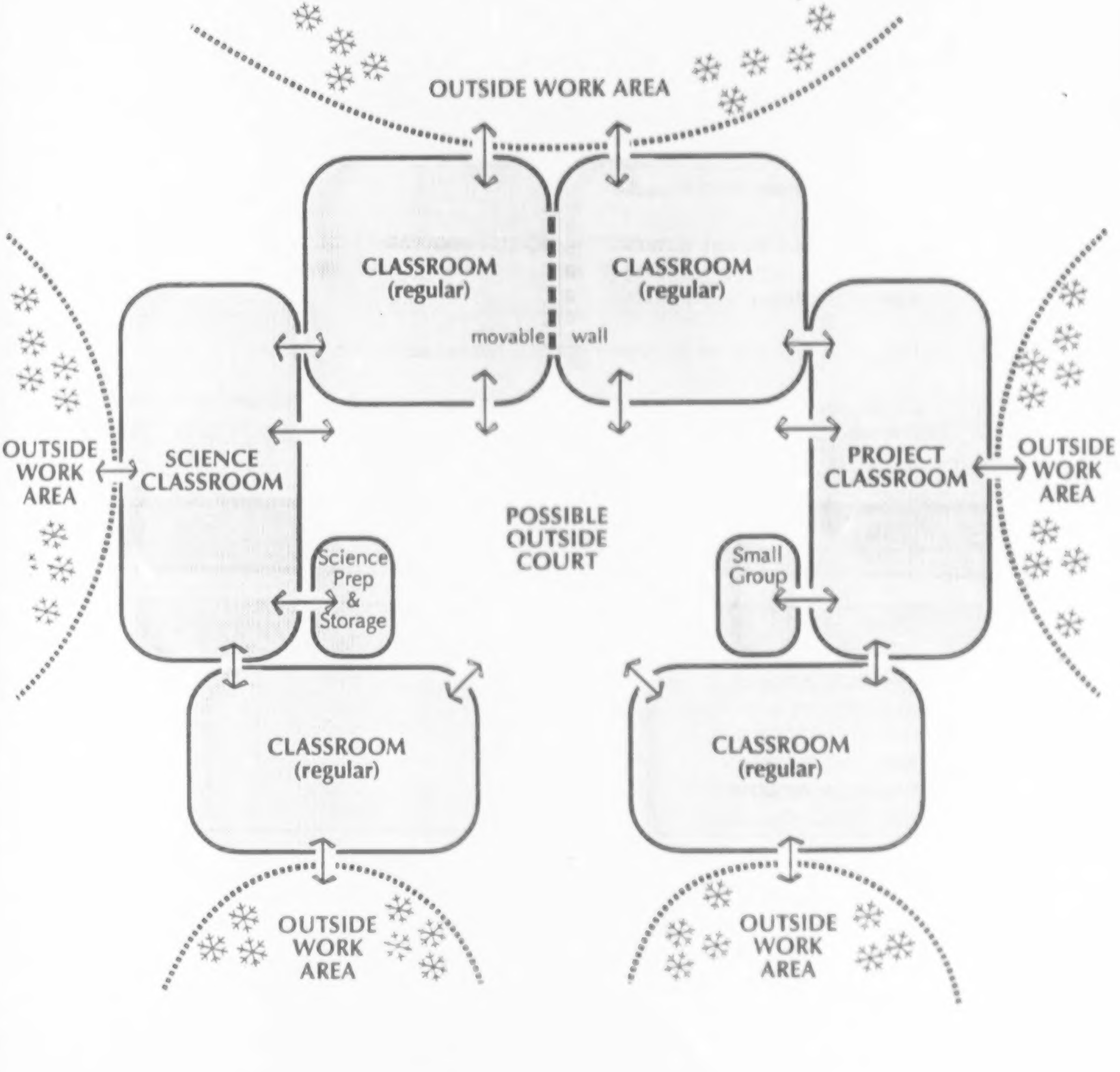
In addition the cluster will contain:

- 1 small group instruction area
- 1 science prep/storage area

One of the primary goals of the district is the flexibility to adapt to different teaching/ learning strategies based on the needs of the students and staff at the local site.

Since the district is implementing the inclusionary approach to special education and gifted programs, it is envisioned that specialists will become involved regularly in the classroom working with students in small groups and individually. All spaces will need to be handicapped accessible.

INSTRUCTIONAL CLUSTERS
FUNCTIONAL RELATIONSHIPS


OUTSIDE WORK AREA
CLASSROOM (regular)
CLASSROOM (regular)
movable wall
OUTSIDE WORK AREA
SCIENCE CLASSROOM
PROJECT CLASSROOM
OUTSIDE WORK AREA
POSSIBLE OUTSIDE COURT
Science Prep & Storage
Small Group
CLASSROOM (regular)
CLASSROOM (regular)
OUTSIDE WORK AREA
OUTSIDE WORK AREA

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

I. A. Cluster Spatial Relationships

1. The cluster of 6 classrooms should be grouped together.
2. The classrooms should be connected either by using a moveable wall, through a door, or be located in such a manner that provides easy flow between the classroom areas in the cluster.
3. There should be an acoustically sound, moveable wall between two of the classrooms in the cluster to provide the opportunity to develop one larger space equivalent to two classrooms.
4. The cluster should be located near the house support areas.
5. Strong desire was expressed to have an outdoor patio area adjacent to the cluster to support outdoor learning activities.

I. A. Cluster Space Requirements

Space	Quantity	Sq. Ft.	Total Area
1. Classroom [regular]	3-4	960	3,840
2. Classroom [science]	1	1200	1,200
2a. Science Prep/Storage	1	150	150
3. Classroom [projects/ technology emphasis]	1	1200	1200
4. Small Group Instruction	1	200	200
Total for each cluster			5,630-6,590
Three clusters per house			18,810
Three houses			56,430
Academic house plan [instructional space]			56,430

I. A. 1). Classroom [Regular]

A. Description

It is proposed that each cluster contain four [4] regular classrooms. This space will need the flexibility to serve as a classroom for:

- Language Arts [English]
- Mathematics
- Social Studies
- Bi-lingual Education
- World Languages
- Special Education
- Gifted and Talented Education
- Health Education

B. Capacity

- 30 students
- 1 teacher
- 1 volunteer and/or specialist on a part-time basis
- Ability to combine two classrooms for large groups up to 60 students

C. Activities

- Teaching\learning methodologies:
    - Cooperative learning [groups of 4-6 students]
    - Thematic instruction
    - Individualized instruction and individual study/work activities
    - Whole group instruction [teachers working with 30 students]
    - Lecture
    - Simulation games
    - Plays and skits
    - Students using computers/other technologies
    - Audio-visual presentations
    - Student tutoring
    - Classroom research projects

I. A. 1). Classroom [Regular]

D. Space Requirements

- Each regular classroom [960 sq. ft.]
- 4 regular classrooms in each cluster
- 12 regular classrooms in each house
- 36 regular classrooms in a middle school

E. Spatial Relationships

- Adjacent to other classrooms in the cluster
- Door or moveable wall between classrooms in the cluster

F. Furniture & Equipment

- Consider moveable furniture to maximize flexibility
- Sinks:
    - 1 single compartment stainless steel with paper and soap dispensers
- Cabinetry:

◆ Counter area for sinks.	height: approx. 36" depth: approx. 30" width: approx. 5'
◆ Under windows. [adjustable shelves/ cabinets]	height: approx. 36" depth: approx. 12" width: as space permits
◆ Teacher wardrobe. [lockable]	height: approx. 7' depth: approx. 24" width: approx. 24"

16" adjustable shelves on one side, 8" area for clothes storage on the other side.

◆ Paper/supply storage [adjustable shelves]	height: approx. 7' width: approx. 48" depth: approx. 24"

I. A. 1). Classroom [Regular]

F. Furniture & Equipment [cont'd]

- Cabinetry: [cont'd]
  - Student project storage [cubbies]
    height: approx. 7'
    width: approx. 10'
    depth: approx. 18"

    Project storage cubicle. Each cubicle approx. 12" X 12" X 18". Approx. 60 cubicles.
- Four computer work stations/ one printer & furniture
- Student desks and chairs
  - Classrooms should contain a variety of student desks & chairs. Approximately half of the regular classrooms should have traditional desks and chairs and the other half should have rectangular tables and separate chairs to facilitate re-arranging desks into large, flat work areas in modular dimensions.
- Teacher desk and chair
- Four-drawer file cabinet [lockable]
- Whiteboard: 4' X 24' [minimum]
- Tackboard:
  - Above whiteboard
  - As much tackable space as design permits

G. Electrical/Technology

- 1 video port/monitor
- 1 voice port/phone
- 1 data port near teacher desk/computer
- 4 data ports for student use/computer

G. Electrical/Technology [cont'd]

- Quad outlets adjacent to each data ports
- Electrical outlets for other equipment [audio-visual, recorders, overhead projectors, etc.]
- 1 clock
- PA "all call" speaker

H. Floors

- Vinyl tile.

I. Windows

- Operable permitting cross ventilation.
- Blinds with darkening capability.

J. Ceilings

- Acoustical tile.

K. Walls

- If moveable walls are to be used, they should be acoustical [STC rating of 43 or higher].

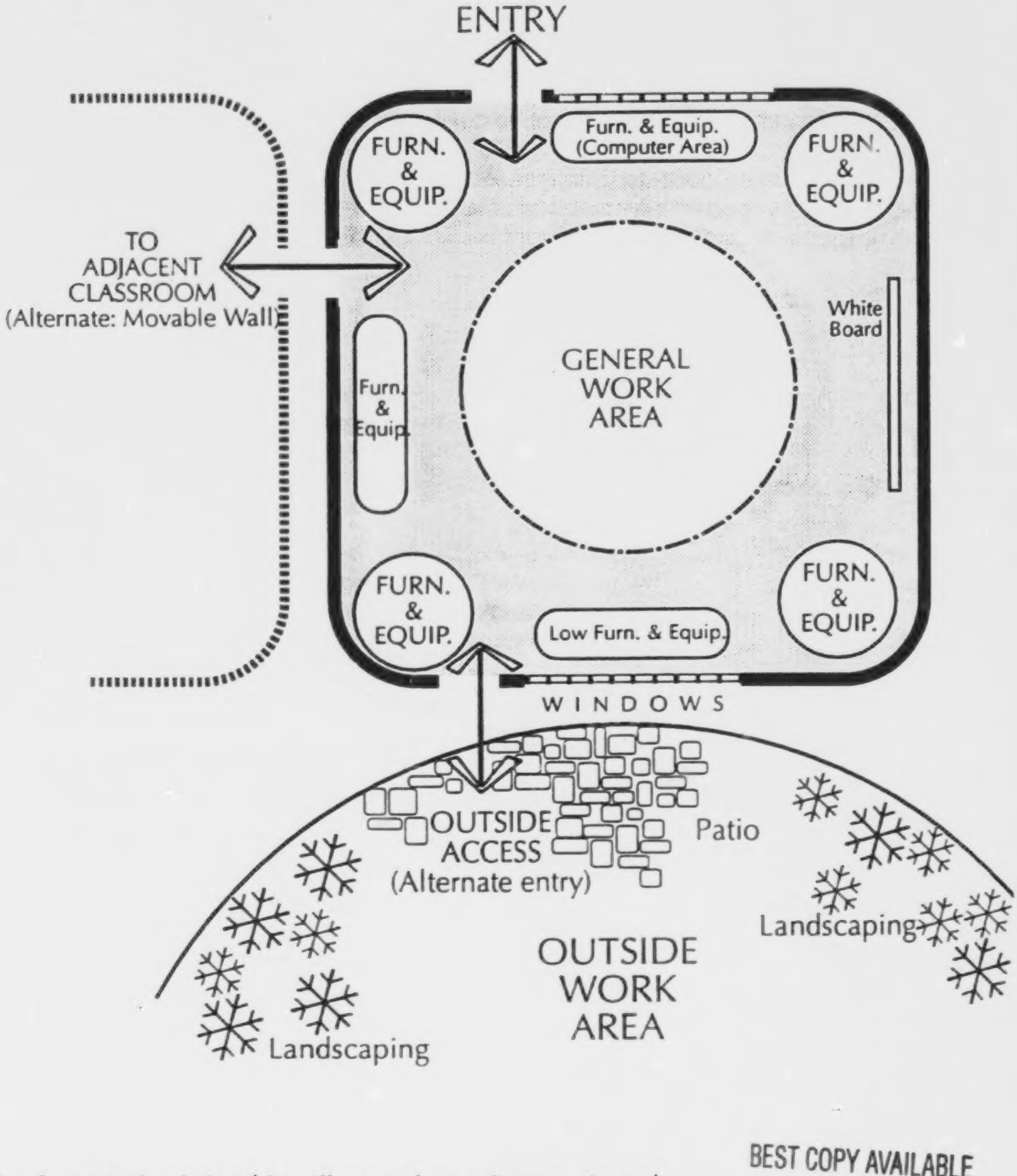
L. Lighting

- Fluorescent fixtures [polarized lens for glare].
- Provide general fluorescent illumination with general task lighting and accent lighting as required to create a welcoming atmosphere.
- Sensors to shut down lights when not occupied and for intrusion detection.

M. Other Special Needs

- None

CLASSROOM
(REGULAR)
FUNCTIONAL RELATIONSHIPS


ENTRY
FURN. & EQUIP.
Furn. & Equip. (Computer Area)
FURN. & EQUIP.
TO ADJACENT CLASSROOM
(Alternate: Movable Wall)
White Board
Furn. & Equip.
GENERAL WORK AREA
FURN. & EQUIP.
Low Furn. & Equip.
FURN. & EQUIP.
WINDOWS
OUTSIDE ACCESS
(Alternate entry)
Patio
Landscaping
OUTSIDE WORK AREA
Landscaping

BEST COPY AVAILABLE

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

I. A. 2). Classroom [Science]

A. Description

It is proposed that each cluster contain one science classroom. A science room at the middle school level should not be confused with a science lab at the high school level. Middle school students are involved in a variety of learning activities and less sophisticated laboratory experiments. Persons who teach science at the middle school level often teach mathematics or other subjects, team teach, and are involved in thematic units. The science room will not be used exclusively for science instruction.

B. Capacity

- 30 students
- 1 teacher
- 1 volunteer and/or specialist on a part-time basis

C. Activities

- Teaching\learning methodologies:
    - Cooperative learning [groups of 4-6 students]
    - Thematic instruction
    - Individualized instruction and individual study/work activities
    - Whole group instruction [teachers working with 30 students]
    - Lecture
    - Simulation games
    - Students using computers/other technologies
    - Audio-visual presentations
    - Student tutoring
    - Classroom research projects

- Science instruction:
    - Physical sciences
    - Earth science
    - Life science

- Team teaching:
    - Math/science
    - Core teaming [English/social studies/math/science]

I. A. 2). Classroom [Science]

C. Activities [cont'd]

- Team teaching: [cont'd]
  - Other arrangements:
    - -science/technology education
    - -science/health education
    - -science/nutrition
    - -science/physical education
  - This classroom may be used by a person teaching other subject areas [including art] for projects.

D. Space Requirements

- Each science classroom [1,200 sq. ft.]
- 1 science classroom in each cluster
- 3 science classrooms in each house
- 9 science classrooms in a middle school

E. Spatial Relationships

- Adjacent to other science prep room and storage.

F. Furniture & Equipment

- Consider moveable furniture to maximize flexibility

- Science sink and counter areas should be around the perimeter of the room with a layout that does not require all students to be in the same location.

- Sinks:
  - 8 single compartment stainless steel

- Cabinetry:
  - Counter/cabinet area for sinks
    - height: approx. 36"
    - depth: approx. 30"
    - width: determined by design

I. A. 2). Classroom [Science]

F. Furniture & Equipment cont'd

- Cabinetry: [cont'd]
    - Cabinet area above sinks
      height: approx. 36"
      depth: approx. 12"
      width: determined by design
    - Teacher wardrobe [lockable]
      height: approx. 7'
      depth: approx. 24"
      width: approx. 24"

      16" adjustable shelves on one side, 8" area for clothes storage on the other side.
    - Student project storage [cubbies]
      height: approx. 7'
      width: approx. 10'
      depth: approx. 18"

      Project storage cubicle. Each cubicle approx. 12" X 12" X 18". Approx. 60 cubicles.
- One moveable teacher demonstration lab.
- Four computer work stations, one printer
- Student desks and chairs
    - Should have rectangular tables and separate chairs to facilitate re-arranging tables into large, flat work areas in modular dimensions.
    - Staff recommendation is that the tables be moveable in such a manner that they may become an peninsula to the sink/lab areas for additional work surface.
- Teacher desk and chair
- One four-drawer file cabinet [lockable]

I. A. 2). Classroom [Science]

F. Furniture & Equipment [cont'd]

- Whiteboard: 4' X 24' [minimum]
- Tackboard:
    - Above whiteboard
    - As much tackable space as design permits

G. Electrical/Technology

- 1 video port/monitor
- 1 voice port/phone
- 1 data port near teacher desk/computer
- 4 data ports for student use/computer
- Quad outlets adjacent to each data ports
- Electrical outlets for other equipment [audio-visual, recorders, overhead projectors, etc.]
- 1 clock
- PA "all call" speaker
- Electrical outlets above sink counter top [away from sinks]. Minimum of a duplex outlet for each lab area.
- Exhaust fan.

H. Floors

- Vinyl tile [chemical resistant].

I. Windows

- Operable windows permitting cross ventilation.
- Blinds with darkening capacity.

J. Ceilings

- Acoustical tile.

K. Walls

- No special instructions.

L. Lighting

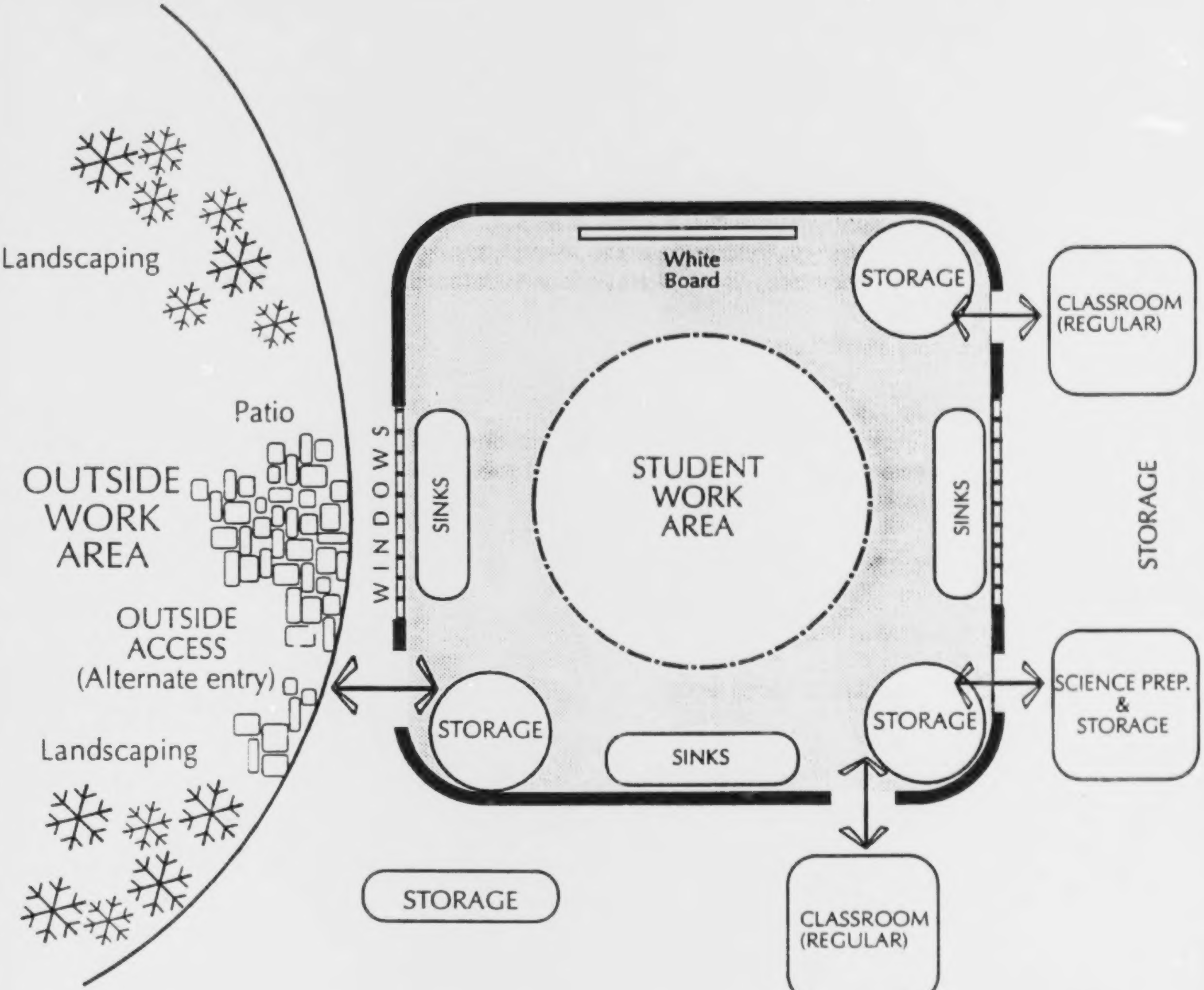
- Fluorescent fixtures [polarized lens for glare].
- Provide general fluorescent illumination with general task lighting and accent lighting as furniture and equipment may require.
- Sensors to shut down lights when not occupied and for intrusion detection.

M. Other Special Needs

- Equipment to be found in science room or adjacent prep area.
    - fire extinguisher
    - first aid kit
    - goggle cabinet with goggles
    - fire blanket
    - eye wash & safety shower

- Gas at lab stations [master shut-off switch]
- Hot and cold water
- Fume hood
- Good ventilation

CLASSROOM
(SCIENCE)


Landscaping
Patio
OUTSIDE WORK AREA
OUTSIDE ACCESS (Alternate entry)
Landscaping
WINDOWS
SINKS
White Board
STORAGE
STUDENT WORK AREA
SINKS
CLASSROOM (REGULAR)
STORAGE
SCIENCE PREP. & STORAGE
STORAGE
STORAGE
SINKS
STORAGE
CLASSROOM (REGULAR)

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

I. A. 2a). Science Prep Area/Storage

A. Description

This is a room for storage of science supplies.

D. Space Requirements

- Each science prep/storage area [150 sq. ft.]
- 1 science prep/storage area in each cluster
- 3 science prep/storage areas in each house
- 9 science prep/storage areas in a middle school

E. Spatial Relationships

- Adjacent to science room
- Note: if clusters are configured in a manner in which there are two adjacent science rooms, it is suggested that there be one larger prep/storage area to serve both rooms.

F. Furniture & Equipment

One dishwasher	
One sink/counter area	height: approx. 36" depth: approx. 30" width: approx. 5'
One small refrigerator	
Cabinetry:	
◆ Lockable cabinet with shelves	height: approx. 7' depth: approx. 18" width: approx. 6'
◆ Adjustable shelving [open]	height: approx. 7' depth: approx. 18-24" width: determined by design

I. A. 2a). Science Prep Area/Storage

G. Electrical/Technology

- One electrical outlet on each wall
- Exhaust fan

H. Floors

- Vinyl tile

I. Windows

- None

J. Ceilings

- Acoustical tile

K. Walls

- No special instructions

L. Lighting

- Fluorescent fixtures

M. Other Special Needs

- Equipment to be found in science room or adjacent prep area.
  - fire extinguisher
  - first aid kit
  - goggle cabinet with goggles
  - fire blanket
  - eye wash & safety shower

- Gas at countertop.
- Hot and cold water.
- Fume hood.
- Exhaust system for chemical storage cabinet.

I. A. 3). Classroom [Projects/Technology]

A. Description

The requirements for the space/program area are similar to those of a regular classroom but with a greater number of potential technological devices [i.e., computers] and wet work areas.

It is proposed that each cluster contain one projects/technology classroom and that there would be three of these rooms in each house. It is anticipated that the staff will use these rooms for different purposes. These rooms may be used as an art room, applied technology room, for other project-based, "hands-on" activities, or as a regular classroom. It is anticipated that any or all of the following subjects areas may use this room:

- Language Arts [English]
- Mathematics
- Social Studies
- World Languages
- Bi-lingual Education
- Special Education
- Gifted & Talented Education
- Health Education

B. Capacity

- 30 students
- 1 teacher
- 1 volunteer and/or specialist on a part-time basis

C. Activities

- Teaching\learning methodologies:
    - Cooperative learning [groups of 4-6 students]
    - Thematic instruction
    - Individualized instruction and individual study/work activities
    - Whole group instruction [teachers working with 30 students]
    - Lecture
    - Simulation games

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I. A. 3). Classroom [Projects/Technology]

C. Activities [cont'd]

- Teaching\learning methodologies: [cont'd]
  - Plays and skits
  - Students using computers/other technologies
  - Audio-visual presentations
  - Student tutoring
  - Classroom research projects

D. Space Requirements

- Each projects/technology classroom [1,200 sq. ft.]
- 1 projects/technology classroom in each cluster
- 3 projects/technology classrooms in each house
- 9 projects/technology classrooms in a middle school

E. Spatial Relationships

- Adjacent to other classrooms in the cluster.
- Door between projects/technology classroom and adjacent classroom in the cluster.
- Strong interest was expressed to have the projects/technology classroom adjacent to outside patio to support outdoor learning activities.

F. Furniture & Equipment

- Strongly suggest moveable furniture to maximize flexibility

- Sinks:
  - 4 single-compartment, stainless steel with paper and soap dispensers

- Cabinetry:
  - Counter area for sinks
    height: approx. 36"
    depth: approx. 30"
    width: approx. 16-20'

I. A. 3). Classroom [Projects/Technology]

F. Furniture & Equipment [cont'd]

- Cabinetry: [cont'd]

◆ Under windows [adjustable shelves/ cabinets]	height: approx. 36" depth: approx. 12" width: as space permits
◆ Teacher wardrobe [lockable]	height: approx. 7' depth: approx. 24" width: approx. 24"

16" adjustable shelves on one side, 8" area for clothes storage on the other side.

◆ Paper/supply storage [adjustable shelves]	height: approx. 7' width: approx. 48" depth: approx. 24"
◆ Student project storage [cubbies]	height: approx. 7' width: approx. 10' depth: approx. 18"

Project storage cubicle. Each cubicle approx. 12" X 12" X 18". Approx. 60 cubicles.

- Up-to twenty [20] computer work stations with printers and furniture
- Student desks and chairs
  - This classroom should have rectangular tables and separate chairs to facilitate re-arranging desks into large, flat work areas in modular dimensions.
- Teacher desk and chair
- One four-drawer file cabinet [lockable]
- Whiteboard: 4' X 24' [minimum]

I. A. 3). Classroom [Projects/Technology]

F. Furniture & Equipment [cont'd]

- Tackboard:
    - Above whiteboard
    - As much tackable space as design permits

G. Electrical/Technology

- 1 video port/monitor
- 1 voice port/phone
- 1 data port near teacher desk/computer
- 20 data ports for student use/computer
- Quad outlets adjacent to each data ports

  Note: Recommend putting data ports, electricity, and conduit in the floor to maximize flexibility and minimize conflict with storage/sink areas.

- Electrical outlets for other equipment [audio-visual, recorders, overhead projectors, etc.]
- 1 clock
- PA "all call" speaker

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting cross ventilation.
- Blinds with darkening capacity.

J. Ceilings

- Acoustical tile.

I. A. 3). Classroom [Projects/Technology]

K. Walls

- If moveable walls are to be used, they should be acoustical [STC rating of 43 or higher].

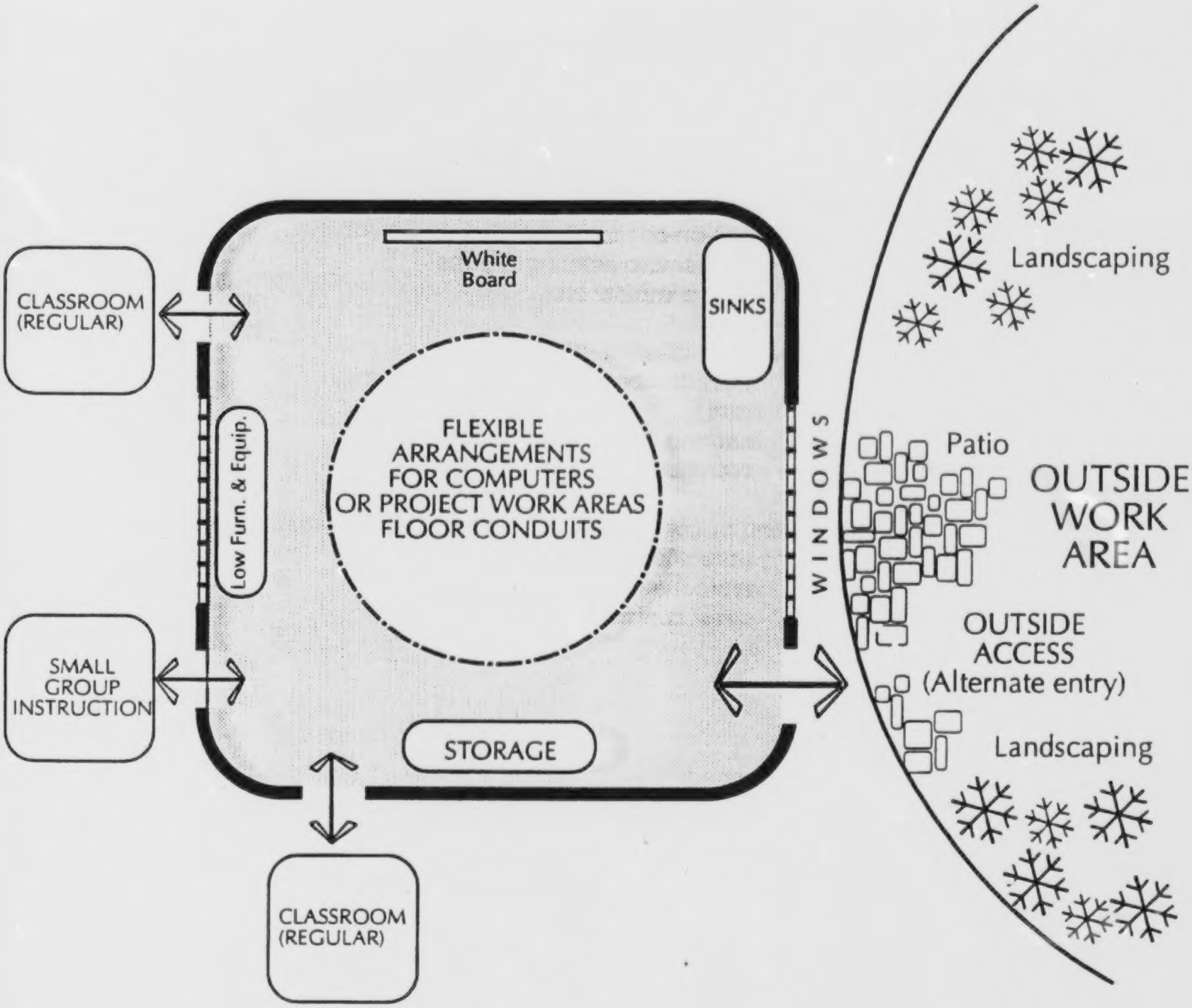
L. Lighting

- Fluorescent fixtures [polarized lens for glare].
- Provide general fluorescent illumination with general task lighting and accent lighting as required to create a welcoming atmosphere.
- Sensors to shut down lights when not occupied and for intrusion detection.
- Consider alternative lighting to avoid glare from fluorescent fixtures and natural light sources.

M. Other Special Needs

- Dedicated electrical circuit for computers.
- Potentially need a patch panel for computer networking and file server.
- Room should be easily converted to other uses through flexible furniture and moveable cabinetry.

CLASSROOM
(PROJECTS /TECHNOLOGY)


CLASSROOM (REGULAR)
White Board
SINKS
Landscaping
FLEXIBLE ARRANGEMENTS FOR COMPUTERS OR PROJECT WORK AREAS FLOOR CONDUITS
Low Furn. & Equip.
WINDOWS
Patio
OUTSIDE WORK AREA
OUTSIDE ACCESS (Alternate entry)
SMALL GROUP INSTRUCTION
STORAGE
Landscaping
CLASSROOM (REGULAR)

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

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I. A. 4). Small Group Instruction

A. Description

The small group instruction areas are to serve as:

- An extension of the classroom
  - one-on-one tutoring
  - cooperative learning groups
  - mini computer lab

- Support space for itinerant staff
  - individualized, small group instruction
  - testing
  - tutoring
  - counseling

- Office/meeting space for adults [special education, psychologist, etc.]
  - parent/teacher meetings
  - team meetings
  - other conferences

B. Capacity

- 1-6 students
- 1 staff/volunteer

C. Activities

- Teaching\learning methodologies:
  - Small group instruction
  - Counseling
  - Individualized instruction and individual study/work activities
  - Tutoring
  - Students/staff using computers/other technologies
  - Small group research projects

I. A. 4). Small Group Instruction

D. Space Requirements

- Each small group instruction area [200 sq. ft.]
- 1 small group instruction space in each cluster
- 3 small group areas in each house
- 9 small group areas in a middle school

E. Spatial Relationships

- Adjacent to classrooms in the cluster
- Door between small group instruction area and at lease one classroom.
- Door to the exterior
- Window between small group instruction area and classroom to facilitate supervision from the classroom.

F. Furniture & Equipment

- Consider moveable furniture to maximize flexibility

- Cabinetry:
  - Under windows. [adjustable shelves/ cabinets]
    height: approx. 30"
    depth: approx. 12"
    width: as space permits

- Tables and chairs
  - Furniture should be selected that permits conferencing for 8-10 persons, individual work activities, and small groups working on projects. If the area is to be used by a specialist as an office/resource room, a teacher desk and file cabinet will be needed. It is anticipated that there will be a variety of furnishings selected for the small group instruction rooms.

- Whiteboard: 4' X 8' [minimum]

- Tackboard:
  - Above whiteboard
  - As much tackable space as design permits

I. A. 4). Small Group Instruction

G. Electrical/Technology

- Double gang box 18" off floor that contains one [1] video port, one [1] data port, one [1] phone jack.
- One quad outlets adjacent to the communications outlet
- One electrical outlet for each wall for other equipment [audio-visual, recorders, overhead projectors, etc.]

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting ventilation.
- Blinds with darkening capacity.
- Interior window[s] to adjacent classroom[s] to facilitate supervision. These windows should also have blinds for privacy when necessary.

J. Ceilings

- Acoustical tile.

K. Walls

- If moveable walls are to be used, they should be acoustical [STC rating of 43 or higher].

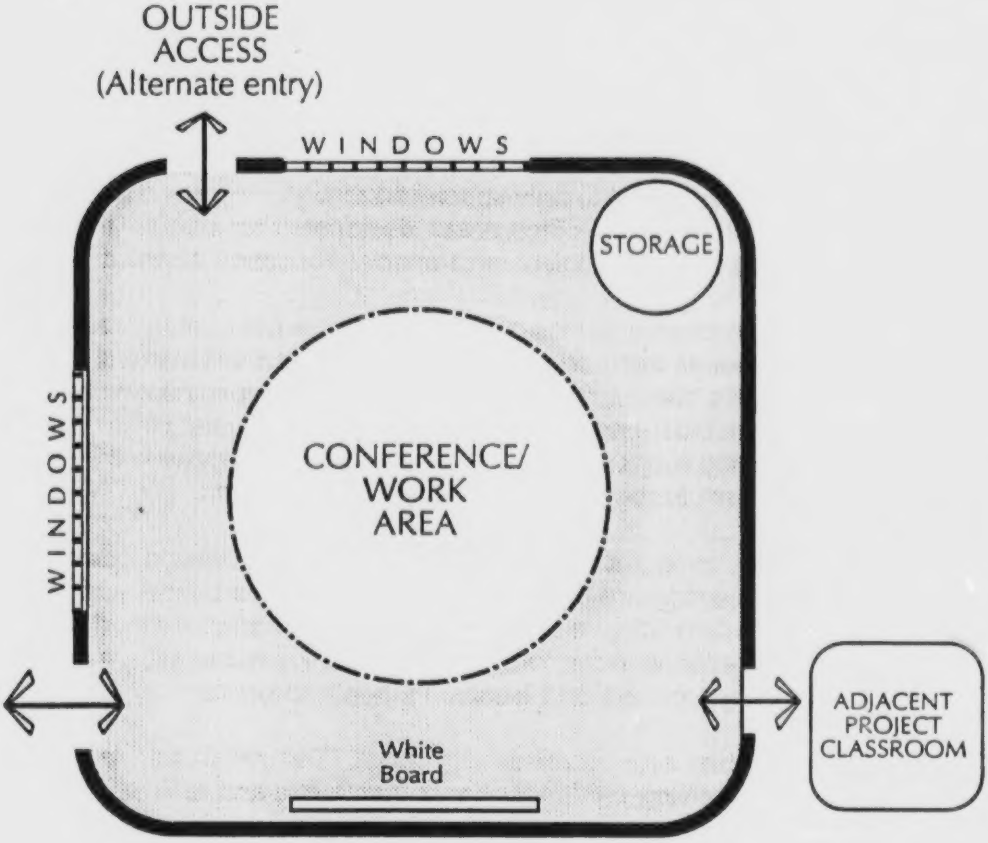
L. Lighting

- Fluorescent fixtures.

M. Other Special Needs

- None

SMALL GROUP INSTRUCTION


OUTSIDE ACCESS (Alternate entry)
WINDOWS
STORAGE
WINDOWS
CONFERENCE/ WORK AREA
ADJACENT PROJECT CLASSROOM
White Board

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

I. A. 5). Special Education

A. Overall Description

The philosophy of the San Diego Unified School District is moving in the direction of an inclusionary model consistent with the philosophy that all children will be included within the regular classroom setting and/or the least restrictive environment.

As can be noted through the educational specifications document, there are no designated areas assigned to only special education. However, it should be noted that, within the school, there are office areas designated for use by the speech therapist, resource specialist, psychologists, and special education itinerant staff members.

In addition, each cluster of classrooms has two small group areas to be used for a variety of purposes as deemed appropriate by the team of teachers. For instance, when a visually impaired child is included in a cluster, the specialist working with that child may need to work independently or in a small group separate from the classroom. The specialist and child may utilize one of the small group areas within the child's cluster [and often adjacent to the child's classroom] for this work.

This inclusionary model does not eliminate the availability of classroom use if it is appropriate in meeting the individual needs of some students. In this instance, one classroom within the cluster would be come the "special needs" classroom. The students would be isolated from the "regular" classroom but still be in proximity to foster inclusion when appropriate and isolation when appropriate.

The school also has a resource/seminar room. This room is envisioned to be used for larger group counseling purposes, health seminars, and as a support area for special education if large groups of special needs students need to be brought together. Again, the actual use of this space would be based on student needs identified at the site.

The intent of this inclusionary model is to provide equal access to the educational options and support services provided by the school district to all children of the same age group. By providing a number of office areas, small group ares, and classrooms within the cluster area, all children will be integrated and their individual differences will be met more appropriately.

All areas of the building will be handicapped accessible and meet all ADA regulations. Spaces identified in these educational specifications have been designed to provide maximum flexibility in order to adapt to the needs of special education. The special education services are to be integrated into all areas of the building and are not to be isolated from the ongoing operations of the school.

I. A. 5). Special Education

Space identified in all areas of the building is to be applicable to special education use. Space requirements include:

- Offices
- Small Group Instruction Areas
- Classrooms
- Resource/Seminar Room
- Restrooms

II. House Support Areas

The administrative and support functions of a middle school should be located in close proximity to the students and teachers. One option for the administrative area calls for the administrative and support functions to be decentralized into the three houses of the school. The purpose of decentralizing these functions is to reinforce a student-centered learning environment. The administrative and support area for each house will serve the needs of approximately 500 students.

The middle school concept is built on a total team approach. The house administrator, teachers, and support staff such as counselors and specialists function as a team in meeting student needs. As a team, these persons determine instructional approaches, student scheduling, student academic and counseling needs, and uses of instructional spaces.

Middle school research has demonstrated that when administrative and support functions are decentralized in close proximity to the instructional teams of teachers, the following occurs:

- Communication is improved between teams of teachers, administrators, and support staff that share responsibility for the same students.
- Administrative and support activities are more focused on the instructional program and the needs of students.
- A stronger relationship develops between students and staff.
- Discipline problems decrease as a result of a smaller, more intimate atmosphere, decreased movement of students across campus, and development of student/adult relationships.

The administrative and staff personnel assigned to this area can vary from school to school. Even though more traditional labels such as "vice principal" and "counselors" are used, new labels are likely to evolve such as "team leader" and "advisor." Most of the district's middle schools have approximately 15 administrative, support staff, and specialists in a middle school for 1,500 students. Some of the staff are full-time; others are part-time, itinerant staff members. It is envisioned that there will be 4-6 persons assigned to each house and 4-6 persons assigned to the overall building administration. The district's central office will determine the number of administrative and support positions for each school with the actual assignment of personnel within the school being a site-based decision.

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II. House Support Areas

Another option for the administrative area would be to centralize the administrative areas. This would allow the administrative team to be located in one area, guidance and itinerant in other houses. Program changes will require flexibility in movement of office areas. The number of offices and use of space may fluctuate if demountable partitioning is used.

Since the actual positions assigned to each house administrative and support area will vary, more generic labels are used to describe the spaces. For example: an office may be used by a vice principal, counselor, resource teacher, attendance officer, psychologist, occupational/physical therapist, or by staff from a collaborating community agency.

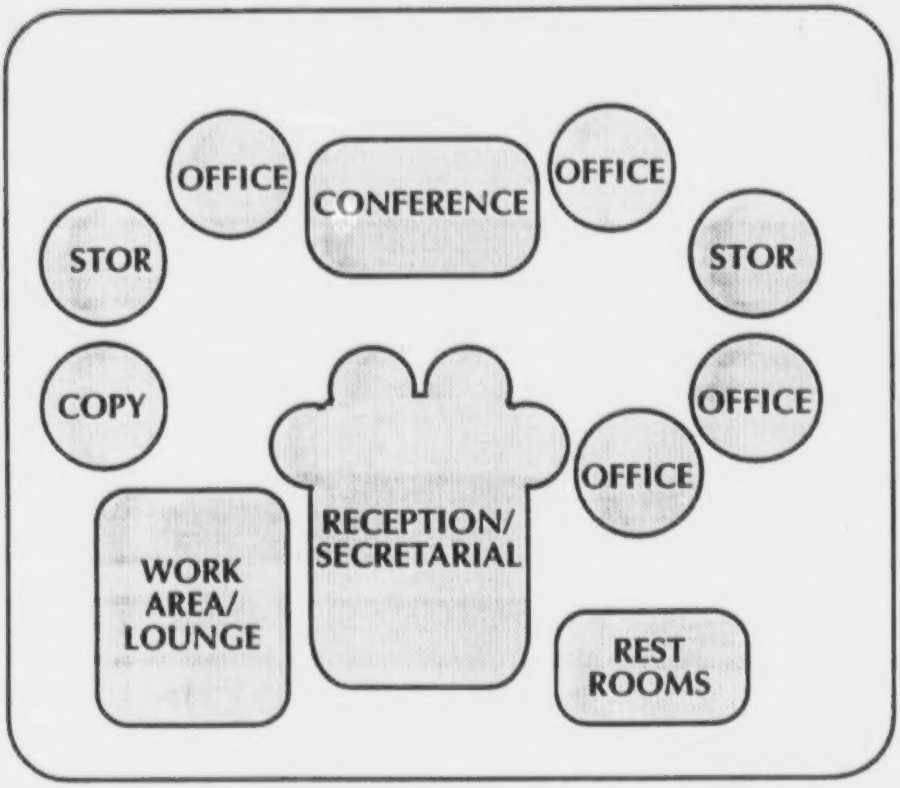
II. House Support Area Spatial Relationships

The administrative and support areas for a house should be located in close proximity to the three instructional clusters of the house.

II. House Support Area Space Requirements

Program Area	# of Stations	Area	Total Area
1. Offices	4	150	600
2. Reception/Secretarial	1	500	500
3. Conference Room	1	200	200
4. Storage	2	100	200
5. Staff Work Area	1	600	600
6. Copy/Production Room	1	200	200
Total for each House			2,300

HOUSE SUPPORT AREAS


OFFICE
CONFERENCE
OFFICE
STOR
STOR
COPY
OFFICE
OFFICE
RECEPTION/
SECRETARIAL
WORK
AREA/
LOUNGE
REST
ROOMS

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Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

II. 1. Offices

A. Description

It is proposed that each house administrative and support area includes four offices. The use of these offices will be a site-based decision, but are likely to include:

- 1 Vice Principal
- 1 Counselor
- 2 Specialists [i.e., resource teacher, itinerant staff member]

B. Capacity

- 1 administrator/specialist
- 2-3 persons for small conferences

C. Activities

- Individual desk work
- 2-3 person conferences with students/teachers/parents
- Interviews
- Counseling
- Individual tutoring
- Recordkeeping/administrative responsibilities

D. Space Requirements

- Each office [150 sq. ft.]
- 4 offices in each house support area

E. Spatial Relationships

- All offices should be located in a suite arrangement.
- Two of the offices should be located adjacent to the conference room.
- All offices should be located adjacent to the secretarial/reception area.

F. Furniture & Equipment

- All furniture should be movable [not fixed].
- Bookshelves to accommodate 50-100 books

F. Furniture & Equipment [cont'd]

- One computer work station with access to printer
- One phone
- One desk & chair
- 2-3 guest chairs
- Two-drawer file cabinet [lockable]
- 4' tackstrip
- Wardrobe cabinet [lockable]

G. Electrical/Technology

- 1 voice port/phone
- 1 data port near teacher desk/computer
- Quad outlets adjacent to each data port
- Electrical outlet on each wall
- Computers in office networked

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting cross ventilation
- Blinds with darkening capacity

J. Ceilings

- Acoustical tile

K. Walls

- No special requirements

L. Lighting

- Fluorescent fixtures.
- Provide general fluorescent illumination with general task lighting and accent lighting as required to create a welcoming atmosphere.

M. Other Special Needs

- Each office should be lockable.

II. 2. Reception/Secretarial

A. Description

The reception/secretarial area is a general office area in which clerical/secretarial tasks are performed. It serves as a waiting area for persons that have appointments with administrative and support personnel. This area may be staffed by secretaries, clerks, aides, volunteers, and/or students.

B. Capacity

- 2 secretaries or clerical aides
- 4-6 persons waiting for appointments

C. Activities

- General secretarial
- Individual desk work
- Reception of teachers, students, parents, visitors
- Computer work
- Recordkeeping/administrative paper work

D. Space Requirements

- Secretarial/reception area [500 sq. ft.]

E. Spatial Relationships

- Secretarial/reception area should be located in a suite arrangement.
- Close attention should be paid to traffic flow throughout the house support area.
- Secretarial/reception area should have direct access to all other functions in the house support area.
- Secretarial/reception area should have direct access to the exterior of the building.

F. Furniture & Equipment

- The furniture design for the secretarial/reception area could include free standing desks or it could include counter type or modular furniture.

F. Furniture & Equipment [cont'd]

- Two secretarial work stations & chairs
- One counter area [shelving under]
  - Height: approx. 42"
  - Depth: approx. 24"
  - Width: approx. 15'
- Two computer work stations, networked to one printer
- Three phones
- 6-8 guest chairs [waiting area]
- 6 four-drawer file cabinets [lockable]
- Tack space [approx. 4']
- Wardrobe cabinet

G. Electrical/Technology

- 1 video port/monitor
- 2 voice port/phone near secretarial desk
- 1 voice port/phone on counter
- 2 data ports near secretarial desk/computer
- Quad outlets adjacent to each data port
- Electrical outlet on each wall
- Consider floor conduit for electrical/data/phone
- 1 clock
- PA "all call" speaker

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting cross ventilation.
- Blinds with darkening capacity to control sun/glare.

J. Ceilings

- Acoustical tile.

II. 2. Reception/Secretarial

K. Walls

- No special requirements.

L. Lighting

- Fluorescent fixtures.
- Provide general fluorescent illumination with general task lighting and accent lighting as required to create a welcoming atmosphere.

M. Other Special Needs

- None

II. 3. Conference Room

A. Description

A conference room has been identified for each house. This room will be used by persons who have offices in the house support area as well as teachers and staff that work in the house. The room should resemble a conference room with a conference table and chairs.

B. Capacity

- 4-10 persons

C. Activities

- Counseling activities
- Conferences with parents, staff, students
- Support space for itinerant staff
  - individualized instruction
  - testing
  - tutoring
  - counseling
- Parent/teachers meetings
- Team meetings

D. Space Requirements

- Conference room area [200 sq. ft.]
- 1 conference room in each house

E. Spatial Relationships

- Adjacent to two of the offices in the house support area
- Adjacent to reception/secretarial area
- Close proximity to other offices and staff workroom

F. Furniture & Equipment

- All furniture should be moveable
- Conference table, approx. 96" [this could be two tables put together]
- 10 conference chairs

II. 3. Conference Room

F. Furniture & Equipment [cont'd]

- Whiteboard: 4' X 8' [minimum]
- Tackboard above whiteboard

G. Electrical/Technology

- Double gang box 18" off the floor that contains one [1] video port, one [1] data port, one [1] phone jack.
- One quad outlet adjacent to the communications outlet
- Electrical outlet one each wall for other equipment [audio-visual, recorders, overhead projectors, etc.]

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting ventilation.
- Blinds with darkening capacity.

J. Ceilings

- Acoustical tile.

K. Walls

- If moveable walls are to be used, they should be acoustical.

L. Lighting

- Fluorescent fixtures.
- Provide general fluorescent illumination with general task lighting and accent lighting as required to create a welcoming atmosphere.

M. Other Special Needs

- None

II. 4. Storage

A. Description

There are two storage rooms required. One area is to be used for paper and supplies and the other for record storage.

B. Capacity

- 100 sq.ft.

C. Activities

- Storage of paper
- Storage of records

D. Space Requirements

- Each storage area [100 sq. ft.]
- 1 storage area for paper and supplies
- 1 storage area for records

E. Spatial Relationships

- 1 storage area adjacent to offices.
- 1 storage area adjacent to copy/production room

F. Furniture & Equipment

- Record storage
  - 5 four-drawer file cabinets
- Paper/supply storage
  - Adjustable shelving [open]
    - height: approx. 7'
    - depth: approx. 18-24"
    - width: determined by design

G. Electrical/Technology

- Electrical outlets

II. 4. Storage

H. Floors

- Vinyl tile

I. Windows

- None

J. Ceilings

- Acoustical tile

K. Walls

- No special instructions

L. Lighting

- Fluorescent fixtures

M. Other Special Needs

- Record storage room should be lockable

II. 5. Staff Work Room/Lounge

A. Description

The staff workroom/lounge is an area where teachers and other staff members meet during their breaks, hold team meetings, and prepare for classes. It is envisioned that this area will be a multi-functional space which will consist of round tables and chairs, some computer work stations, a kitchenette, and informal lounge furniture. Each house will consist of 20-30 staff members who will have breaks at different times of the day. This area should be comfortable and aesthetically pleasing.

B. Capacity

- 5-25 staff at one time

C. Activities

- Team meetings
- Grading papers
- Developing course material
- Individual computer work
- Coffee breaks
- Informal meetings

D. Space Requirements

- Staff workroom/lounge [600 sq. ft.]

E. Spatial Relationships

- Adjacent to copy/production room
- Adjacent to staff restrooms
- Adjacent to secretarial/reception area
- Suggest adjacent to outside patio with porch furniture or picnic table

F. Furniture & Equipment

- Cabinetry:
    - Kitchenette
      height: approx. 36"
      depth: approx. 24"
      width: approx. 5'

II. 5. Staff Work Room/Lounge

F. Furniture & Equipment [cont'd]

- Cabinetry: [cont'd]
    - Counter area [cabinets above & below]
      height: approx. 36"
      depth: approx. 30"
      width: approx. 10-15'

      [cabinets for supply storage]
    - Staff mail boxes [cubbies]
      height: approx. 7'
      width: approx. 12'
      depth: approx. 16"

      Staff mail boxes. Each cubicle approx. 4" X 12" X 16". Approx. 40 cubicles.
- 2 computer work stations with printers & furniture [networked]
- 1 refrigerator
- 1 fax machine
- 1 microwave oven
- Tables & chairs
    - Suggest three to four 4-5' round tables with 4-6 upholstery covered chairs.
- Informal lounge furniture [soft chairs]
- Whiteboard: 4' X 8' [minimum]
- Tackboard:
    - Above whiteboard
    - 8' tack strip for messages/announcements/etc.

G. Electrical/Technology

- 1 video port/monitor
- 2 voice ports/phones
- 2 data ports near computer work stations
- Quad outlets adjacent to each data port
- Electrical outlets for other equipment [refrigerator, microwave oven, audio-visual, recorders, overhead projectors, etc.]
- Electrical outlets above counter
- 1 clock
- PA "all call" speaker

II. 5. Staff Work Room/Lounge

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting cross ventilation.
- Blinds with darkening capacity.

J. Ceilings

- Acoustical tile.

K. Walls

- No special requirements.

L. Lighting

- Fluorescent fixtures.
- Provide general fluorescent illumination with general task lighting and accent lighting as required to create a welcoming atmosphere.
- Consider alternative lighting to avoid glare from fluorescent fixtures and natural light sources.

M. Other Special Needs

- None

II. 6. Copy/Production Room

A. Description

This room primarily supports the duplicating and small scale material production functions of the house.

B. Capacity

- 2-3 persons

C. Activities

- Producing copies
- Creating transparencies
- Developing course material

D. Space Requirements

- Copy/production room [200 sq. ft.]

E. Spatial Relationships

- Adjacent to staff workroom.
- Adjacent to paper supply storage.

F. Furniture & Equipment

- Cabinetry
    - Counter area [cabinets above & below]
      height: approx. 36"
      depth: approx. 30"
      width: approx. 10'

      [cabinets for supply storage]
- Copy machine

G. Electrical/Technology

- Electrical outlet for copy machine
- Electrical outlet above counter

II. 6. Copy/Production Room

H. Floors

- Vinyl tile.

I. Windows

- None.

J. Ceilings

- Acoustical tile.

K. Walls

- No special instructions.

L. Lighting

- Fluorescent fixtures.

M. Other Special Needs

- None.

III. Building Administration

The building administration would serve the coordinating role for the total middle school, including overall instructional leadership, building management, and liaison with the community and the district's central office. Many of the administrative and counseling functions typically found in the "principal's office" may be decentralized into the three houses of the school. There are certain functions and spaces such as building attendance, finance, health service, and community/volunteer rooms that would be cost-prohibitive to duplicate in each of the houses or "schools within the school".

It is envisioned there will be 4-6 persons functioning out of the building administration. The district's central office will determine the number of administrative and support positions for each school and the actual assignment of personnel within the school will be a site-based decision.

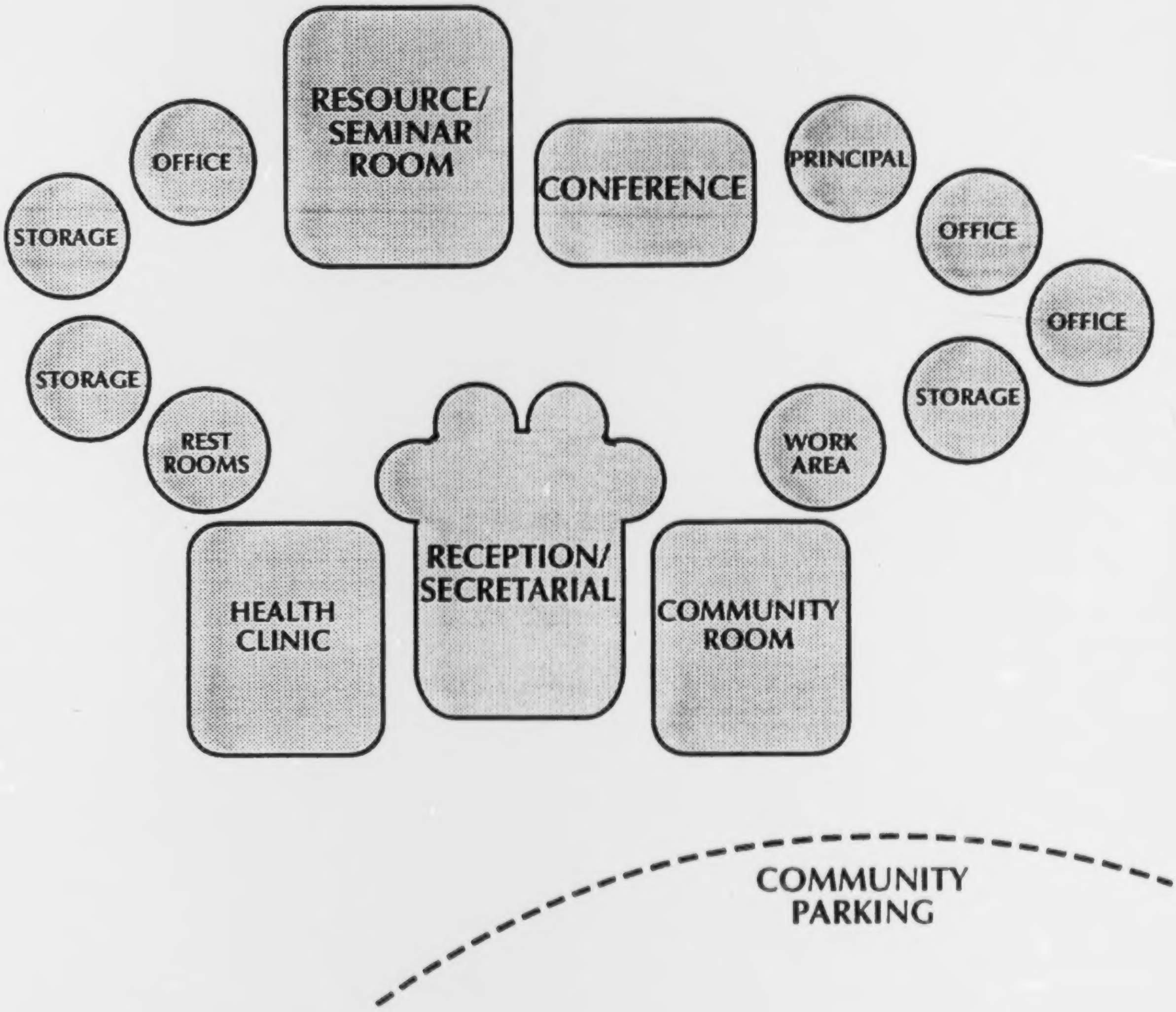
Since the actual positions assigned to the building administration area will vary, more generic labels are used to describe the spaces. For example: an office may be used by a principal, attendance officers, specialist, or a collaborating community agency.

The building administration should be located in close proximity to visitor parking, the cafeteria, and the academic houses.

III. Building Administration Space Requirements

Space	Quantity	Sq. Ft.	Total Area
1. Offices	1	200	200
	3	150	450
2. Reception/Secretarial	1	500	500
3. Conference Room	1	250	250
4. Storage	1	150	150
5. Staff Lounge	1	300	300
6. Copy/Production Room	1	200	200
7. Community Room	1	700	700
8. Health Services	1	500	500
9. Resource/Seminar/Room	1	700	700
Building Administration Area			3,950

BUILDING ADMINISTRATION


OFFICE
STORAGE
RESOURCE/ SEMINAR ROOM
CONFERENCE
PRINCIPAL
OFFICE
OFFICE
STORAGE
STORAGE
REST ROOMS
RECEPTION/ SECRETARIAL
WORK AREA
HEALTH CLINIC
COMMUNITY ROOM
COMMUNITY PARKING

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

III. 1. Offices See [II. 1]

Note: All items in Section II. 1 apply unless otherwise noted

A. Description

It is proposed that each house administrative and support area include four offices. The use of these offices will be a site-based decision, but are likely to include:

- 1 principal
- 3 specialists/support personnel

D. Space Requirements

- 3 offices [150 sq. ft.]
- 1 principal's office [200 sq. ft.]

E. Spatial Relationships

- Two of the offices should be located adjacent to the conference room [one of which is the principal's office]

F. Furniture & Equipment

- One credenza in the principal's office

G. Electrical/Technology

- 1 video port in principal's office

III. 2. Reception/Secretarial [See II. 2]

Note: All sections in II. 2 apply unless otherwise noted

F. Furniture & Equipment

- Cabinetry:
  - Staff mail boxes [cubbies]
    height: approx. 7'
    width: approx. 12'
    depth: approx. 16"

    Staff mail boxes. Each cubicle approx. 4" X 12" X 16". Approx. 100 cubicles.

III. 3. Conference Room [See II. 3]

Note: All sections in II. 3 apply unless otherwise noted

B. Capacity

- 4-15 persons

D. Space Requirements

- Conference room area [250 sq. ft.]

F. Furniture & Equipment

- Conference table, approx. 120" [this could be two tables put together]
- 14 conference chairs

III. 4. Storage [See Section II. 4]

Note: All sections in II. 4 apply unless otherwise noted.

A. Description

There is one storage room required which will be used for paper, supplies, and record storage.

D. Space Requirements

- Each storage area [150 sq. ft.]

E. Spatial Relationships

- Storage area adjacent to offices.
- Storage area adjacent to copy/production room

F. Furniture & Equipment

- 5 four-drawer file cabinets
- Paper/supply storage
  - Adjustable shelving [open]
    - height: approx. 7'
    - depth: approx. 18-24"
    - width: determined by design

III. 5. Staff Lounge

A. Description

The staff work area is where staff members meet during their breaks. It is envisioned that this area will be similar to a small kitchen area

B. Capacity

- 2-10 staff at one time

C. Activities

- Preparation time

III. 5. Staff Lounge

D. Space Requirements

- Staff lounge [300 sq. ft.]

E. Spatial Relationships

- Adjacent to copy/production room
- Adjacent to staff restrooms
- Adjacent to secretarial/reception area

F. Furniture & Equipment

- Cabinetry:
    - Kitchenette
      height: approx. 36"
      depth: approx. 24"
      width: approx. 5'
    - Counter area [cabinets above & below]
      height: approx. 36"
      depth: approx. 30"
      width: approx. 8-10'

      [cabinets for supply storage]
- 1 refrigerator
- 1 microwave oven
- Tables & chairs
    - Suggest two to three 5' round tables with 4-6 upholstered chairs.
- Tackboard:
    - 4-6' tack strip for messages/announcements/etc.

G. Electrical/Technology

- 1 voice port/phone
- Electrical outlets for equipment [refrigerator, microwave oven]

G. Electrical/Technology [cont'd]

- Electrical outlets above counter
- 1 clock
- PA "all call" speaker

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting cross ventilation.

J. Ceilings

- Acoustical tile.

K. Walls

- No special requirements.

L. Lighting

- Fluorescent fixtures.
- Provide general fluorescent illumination with general task lighting and accent lighting as required to create a welcoming atmosphere.

M. Other Special Needs

- None.

III. 6. Copy/Production Room [See II.6]

Note: All items in Section II. 6 apply unless otherwise noted.

A. Description

It is proposed that this room will have a higher volume copy machine than those located in each house to facilitate large-run copying needs.

III. 7. Community Room

A. Description

The community room is an area where volunteers, parents and other community members are involved in a wide variety of formal and informal activities. This area may be used to conduct parent/community meetings, parenting classes, volunteer work area, and serve as a lounge for persons involved in school and community-related activities. It is envisioned that this area will be a multi-functional space which will consist of round tables and chairs, some computer work stations, a kitchenette, and informal lounge furniture. This area will serve as the staging area of volunteer activities for the entire school. This area should be comfortable and aesthetically pleasing.

B. Capacity

- 5-20 parents/volunteers at one time

C. Activities

- Community meetings
- Grading papers
- Developing course material
- Individual computer work
- Coffee breaks
- Informal meetings

D. Space Requirements

- Community Room [700 sq. ft.]

III. 7. Community Room

E. Spatial Relationships

- Adjacent to copy/production room
- Adjacent to restrooms
- Adjacent to secretarial/reception area
- Suggest adjacent to outside patio with porch furniture or picnic table

F. Furniture & Equipment

- Cabinetry:
    - Kitchenette
        - height: approx. 36"
        - depth: approx. 24"
        - width: approx. 5'
    - Counter area [cabinets above & below]
        - height: approx. 36"
        - depth: approx. 30"
        - width: approx. 10-15'

    [cabinets for supply storage]

- 2 networked computer work stations with printers & furniture [possibly built-in along one wall or corner]
- 1 refrigerator
- 1 microwave oven
- Tables & chairs
    - Three to four 4-5' rectangular tables with 4-6 upholstery-covered chairs. The table should have the capability to be configured conference style.
- Informal lounge furniture [soft chairs]
- Whiteboard: 4' X 12' [minimum]
- Tackboard:
    - Above whiteboard
    - 8' tack strip for messages/announcements/etc.

G. Electrical/Technology

- 1 video port/monitor
- 2 voice ports/phones
- 2 data ports near computer work stations

G. Electrical/Technology [cont'd]

- Quad outlets adjacent to each data port
- Electrical outlets for other equipment [refrigerator, microwave oven, audio-visual, recorders, overhead projectors, etc.]
- Electrical outlets above counter
- 1 clock
- PA "all call" speaker

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting cross ventilation.
- Blinds with darkening capacity.

J. Ceilings

- Acoustical tile.

K. Walls

- No special requirements.

L. Lighting

- Fluorescent fixtures.
- Provide general fluorescent illumination with general task lighting and accent lighting as required to create a welcoming atmosphere.
- Consider alternative lighting to avoid glare from fluorescent fixtures and natural light sources.

M. Other Special Needs

- None.

III. 8. Health Services

A. Description

Health services include intervention, attendance to sick or injured students, prevention, seminars, screening, and consultation. Health service personnel are involved in extensive communication with building staff, students, parents, and health care providers. Increasingly, interest has been expressed to engage in greater collaboration with community health services for the screening and referral of students, parents, and community members. This area should be master-planned for expansion.

B. Capacity of Clinic

- 1-8 persons at one time
- 1 nurse or health specialist [aides, technician]

C. Activities

- Health promotion activities: small student groups, family groups, and student support groups for prevention and intervention.
- Health assessment activities, such as health maintenance, physical examinations, health counseling, and developmental assessment.
- Employee health activities, health promotion, and screening.
- Health management for chronic health conditions.
- Primary health care services including treatment for minor illnesses and accidents.
- Infection control activities for prevention of disease.
- Interagency services such as social services for families with eligibility with worker on-site and family counseling services.

D. Space Requirements

- Health clinic [500 sq. ft.]
- This area should be configured to provide area for:
  - office [approx. 100 sq. ft]
  - 2-4 cots
  - restroom that is handicapped accessible
- The following building administration areas need to be accessible to health services:
  - conference room [250 sq. ft.]
  - additional offices
  - seminar/resource room [700 sq. ft.]
  - community room [700 sq. ft.]

III. 8. Health Services

D. Space Requirements

- Suggestions have also been made to incorporate provisions that would permit a mobile health clinic to tie into the health services area of the building.

E. Spatial Relationships

- Adjacent to secretarial/reception area [should be a window between clinic and reception area to facilitate supervision]
- Access from secretarial/reception area
- Outside direct access
- Near conference room, seminar/resource room, and community room.

F. Furniture & Equipment

- Cabinetry:

◆ Counter area [cabinets above & below]	height: approx. 36" depth: approx. 30" width: approx. 8-10'

[cabinet door-lockable]

◆ Lockable cabinet [medicine & supplies adjustable shelves]	height: approx. 7' depth: approx. 12-14" width: approx. 5'

[storage of oxygen tanks, etc.]

- 1 computer work station with printer [networked to student data files and administration]
- 1 small refrigerator
- 1 examining table for physical examinations
- 2-4 cots
- Chairs
- Desk & chair in office
- Two-drawer file cabinet
- Tackboard approx. 4' X 4'
- Health screening and vision screening equipment

III. 8. Health Services

G. Electrical/Technology

- 1 voice port/phone
- 1 data port near computer work stations
- Quad outlets adjacent to data port
- Electrical outlets for other equipment [refrigerator, health and vision screening equipment]
- Electrical outlets above counter
- 1 clock
- PA "all call" speaker

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting cross ventilation.
- Blinds with darkening capacity.

J. Ceilings

- Acoustical tile.

K. Walls

- No special requirements.

L. Lighting

- Fluorescent fixtures.
- Provide general fluorescent illumination with general task lighting.

M. Other Special Needs

- Consider air-conditioning.
- Ability to sub-divide area for privacy [physical examinations, counseling].
- Acoustical treatment for hearing tests.

III. 9. Resource/Seminar Room

A. Description

The purpose of a resource/seminar room is to provide space for large group counseling, health service seminars, special education activities, and large group conferences. It may also be used as a career center.

B. Capacity

- 20-30 persons
- 1-2 resource persons [counselor, nurse, aide, or teacher]

C. Activities

- Large group counseling sessions
- Career resource center
- Large group conferences
- Special education resource center

The actual use of this space may vary from time to time depending on the needs of the local site level.

D. Space Requirements

- Resource/seminar room [700 sq. ft.]

E. Spatial Relationships

- Near building administration office/suite
- Moveable wall to divide space in half

F. Furniture & Equipment

- Consider moveable furniture to maximize flexibility

- Sinks:
    - 1 single-compartment, stainless steel with paper and soap dispensers

III. 9. Resource/Seminar Room

F. Furniture & Equipment [cont'd]

- Cabinetry:
  - Counter area for sinks
    height: approx. 36"
    depth: approx. 30"
    width: approx. 5'
  - Under windows [adjustable shelves/ cabinets]
    height: approx. 36"
    depth: approx. 12"
    width: as space permits
  - Shelving around perimeter of room as design permits for storage of resource material.
    height: approx.: 4-5'
    depth: approx. 12-14"
    width: as space permits
  - Paper/supply storage [adjustable shelves]
    height: approx. 7'
    width: approx. 48"
    depth: approx. 24"
- Four computer work stations with one printer
- Tables & chairs
  - Rectangular table and separate chairs to facilitate re-arranging desks into a variety of areas: conference, hollow square, classroom style.
- Whiteboard:
  - 4' X 16' [minimum], consider putting whiteboard on moveable wall divider.
- Tackboard:
  - Above whiteboard
  - As much tackable space as design permits

III. 9. Resource/Seminar Room

G. Electrical/Technology

- 1 video port/monitor
- 1 voice port/phone
- 4 data ports for computers
- Quad outlets adjacent to each data ports
- Electrical outlets for other equipment [audio-visual, recorders, overhead projectors, etc.]
- 1 clock
- PA "all call" speaker

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting cross ventilation.
- Blinds with darkening capacity.

J. Ceilings

- Acoustical tile.

K. Walls

- Moveable wall should be acoustical.

L. Lighting

- Fluorescent fixtures.
- Provide general fluorescent illumination with general task lighting and accent lighting as required to create a welcoming atmosphere.

M. Other Special Needs

- None.

IV. Exploratory Programs

A middle school incorporates a number of exploratory programs. These programs include art, music, consumer and family studies [formerly home economics], and technology education [formerly industrial arts].

Each of the building's three houses includes classrooms that are equipped to facilitate exploratory programs. These project classrooms, which are larger than regular classrooms and equipped with sinks and a higher level of technology, can support some art, consumer, and technology education programs. Through this arrangement, there is a greater probability that teachers in these areas will participate in team teaching activities with the language arts, mathematics, science, and social studies teachers.

Even though a great deal of content can be delivered in the classroom "project" areas identified in the academic house plan, a middle school is still in need of some specialized areas that would be cost-prohibitive to duplicate in each of the houses. These include an art studio, technology education lab, foods lab, and music facilities.

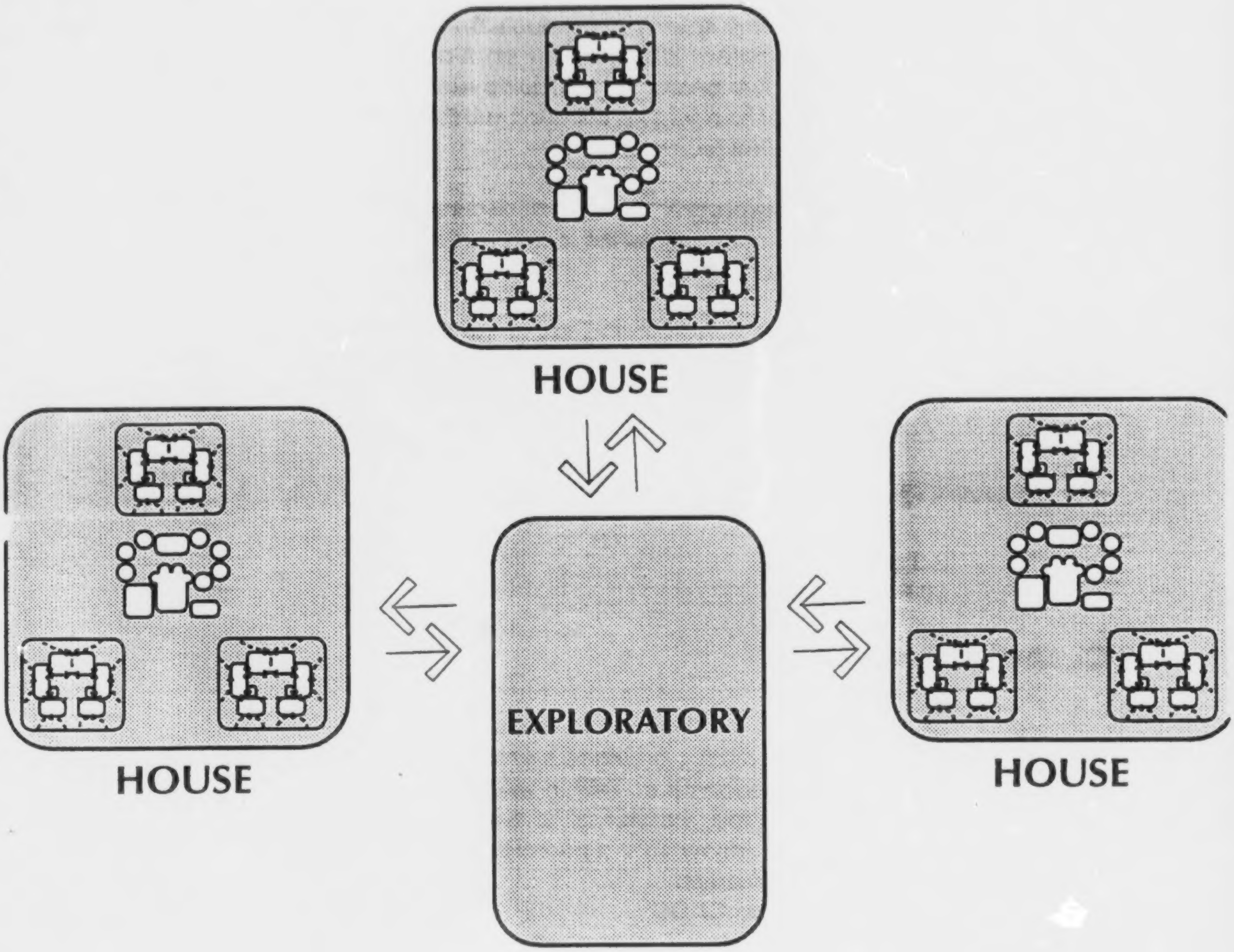
IV. Exploratory Programs Spatial Relationships

The exploratory program areas should be located in close proximity to the academic houses with the exception of music. It is proposed that the music area be near the cafeteria/performance area.

IV. Exploratory Programs Space Requirements

Space	Quantity	Sq. Ft.	Total Area
A. School-to-Work Transition Center			
1. Modular Work Station Area	1	2,400	2,400
2. Consumer & Family Science	1	2,400	2,400
3. Demo/Lecture Area	1	700	700
4. Power Tool Room	1	400	400
5. Audio/Video Room	1	400	400
6. Student Work Room	1	600	600
7. Computer Room	1	500	500
8. Storage	1	400	400
9. Outdoor Work Area	1	-	-
B. Band/Music Room	1	2,450	2,450
C. Art Room	1	1,700	1,700
Exploratory Programs			11,950

EXPLORATORY PROGRAMS


HOUSE
HOUSE
EXPLORATORY
HOUSE

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

IV. A. School-to-Work Transition Center

A. Description

The district is moving from the traditional industrial arts programs to a technology education program. The program is organized on a modular arrangement in which students work in teams of 2-4 persons. Students also follow a modular schedule, typically working in blocks of two weeks on each module and then rotating to a new module. The teacher serves as facilitator.

Successful applications of this program have included interdisciplinary studies focusing on collaborative activities with math, science, consumer living, language arts, and other curricular components of the school.

Under the title of School-to-Work Transition Center, the district will provide an integrated curriculum covering Business, Consumer and Family Science and Industrial Technology. Career Awareness, Career Exploration and Life Skills [Scans Skills] will be the focus of this exploratory core.

B. Capacity

- 2-3 teachers.
- 60-90 students.

C. Activities

- Students working in 2-4 person teams.
- At each site the district provides a variety of focus areas. There are likely to be multiple stations [i.e., 7-8] in which 2-4 students are working at each station. Often the teacher at the school site develops his/her own curriculum. The following is a partial list of the types of activities that might be included in this area:
    - Auto CADD
    - Robotics & automation
    - Electricity
    - Electronics
    - Energy, power, mechanics
    - Applied physics
    - Graphic communications
    - Flight/rocketry & space
    - Desktop publishing
    - Media production

IV. A. School-to-Work Transition Center

D. Space Requirements

The center or "hub" of the cluster of classrooms will be the Modular Work Station Area. Connected to this area are the Consumer and Family Science Multi-Purpose Lab, Demonstration/Lecture Area, Power Tool Room, Audio/Video Room, Student Work Room, Computer Room, and Storage Room.

- Modular Work Station Area [approx. 2400 sq.ft.]
- Consumer and Family Multi-Purpose Lab [approx. 2400 sq.ft.]
- Demo/Lecture Area [approx. 700 sq. ft.]
- Power Tool Room [approx. 400 sq.ft.]
- Audio/Video Room [approx. 400 sq. ft.]
- Student Work Room [approx. 600 sq.ft.]
- Computer Room [approx. 500 sq. ft.]
- Storage Room [approx. 400 sq. ft.]
- Outdoor Work Areas [approx. 1000-1500 sq. ft.]

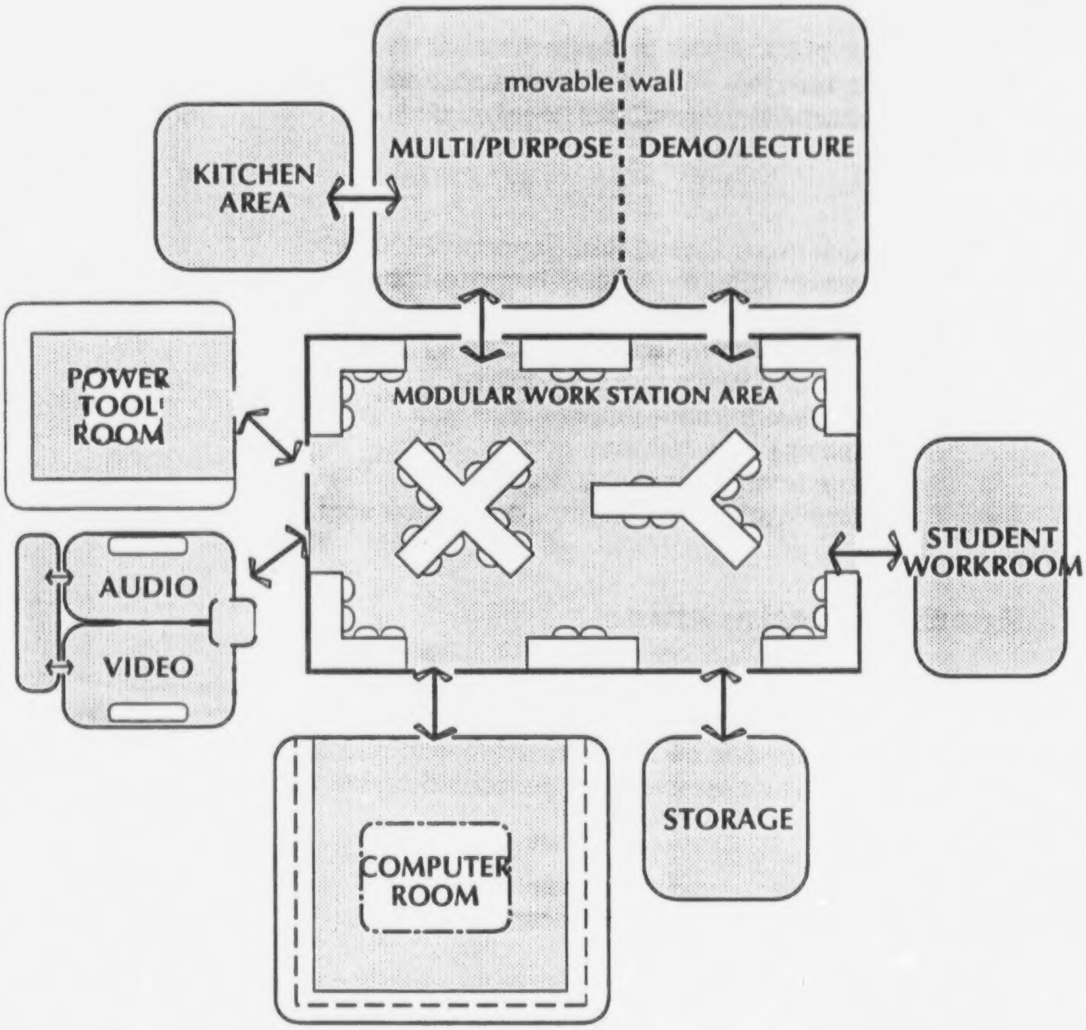
E. Spatial Relationships

The School-to-Work Transition Center will include activities covering business education, industrial technology, and consumer and family science in an integrated setting. All teaching areas and labs will be interconnected and interdisciplinary to create a true integrated program. The center should be located on the campus to facilitate access to all other areas.

- Located near academic houses.
- Located near library media center.

Note: There should be good visibility between all areas in the School-to-Work Transition Center to facilitate instructors supervising multiple areas through use of an interior window, appropriate location of interior doors, and layout of rooms that provides clear visual access.

SCHOOL TO WORK TRANSITION AREA


movable wall
MULTI/PURPOSE
DEMO/LECTURE
KITCHEN AREA
POWER TOOL ROOM
MODULAR WORK STATION AREA
AUDIO
VIDEO
STUDENT WORKROOM
COMPUTER ROOM
STORAGE

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

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IV. A. 1. Modular Work Station Area

F. Furniture & Equipment [cont'd]

The following are examples of types of furniture to be included:

- 2 modules with a sink [hot & cold water] and counter space [approx. 3' X 7.5' with cabinets above and below]
- 24 modules with work surfaces [approx. 3' X 7.5']
- Computers [approx. 24 to be networked with CD ROM, interactive video]
- Monitors [approx. 24 - at most modular stations]
- Printers & plotter [approx. 6-8]
- Light table[s]
- Video camera[s] [number to be determined by the district]
- Phone
- Fax machine
- Lockable shelving and storage room for staff materials and student projects
- One phone for teacher use
- 2-3 teacher work stations
- 40 stenotype chairs [i.e., Hoan Anywhere Chair]
- Tackstrip above whiteboard & wall areas
- Whiteboard [approx. 4' X 24']
- Roof antenna for shortwave & CB

G. Electrical/Technology

- Conduit on perimeter of wall, ceiling, and/or floor conduit for electrical, data, voice, and video distribution [most electrical is 120, 20 amp]
- Each module should have:
    - 2 data ports [data & voice]
    - 2-3 duplex outlets
    - 1 video port [allowing for interactive video]
- 1 voice port/phone for teacher station
- 1 data port near each teacher desk/computer
- Internal voice communication system between teacher station and each student module and area within School-to-Work Transition Center [possibly wireless, flexible to permit rearrangement of modules].
- Compressed air at two modules [90 psi @ 2 cfm]

H. Floors

- Vinyl tile.

IV. A. 1. Modular Work Station Area

A. Description

This area would serve as the "hub" for the School-to-Work Center. The area would include approximately 24 modular teaching stations with two students to each station. Each modular station would be portable to provide flexibility in making adjustments to curricular offerings.

B. Capacity

- 1-2 teachers.
- 30-40 students.

C. Activities

- Students working in 2 person teams.
- At each site the district provides a variety of focus areas. There are likely to be multiple stations [i.e., 7-8] in which 2 students are working at each station. Often the teacher at the school site develops his/her own curriculum.

D. Space Requirements

- Modular work station area [approx. 2400 sq. ft.]

E. Spatial Relationships

- Located in the center of the School-to-Work Transition Center
- Doors and window to adjacent areas for supervision

F. Furniture & Equipment

This area will consist primarily of modular furniture capable of being arranged into multiple configurations as curriculum is revised and new groupings are formed. Twenty-four to twenty-five modules will be required. Consult with the district before selecting furniture and equipment. It is suggested that the plumbing, electrical, technology conduit and special utilities be included in the design of this area with actual furniture and equipment determined just prior to final construction.

IV. A. 1. Modular Work Station Area

I. Windows

- Operable windows permitting cross ventilation.
- Blinds with darkening capacity.
- Windows between Modular Work Station area and adjacent rooms to facilitate supervision.

J. Ceilings

- Acoustical tile. Options should be considered once design and layout of furnishings and electrical/compress air service are determined.

K. Walls

- Acoustically appropriate [STC rating of 43 or higher].

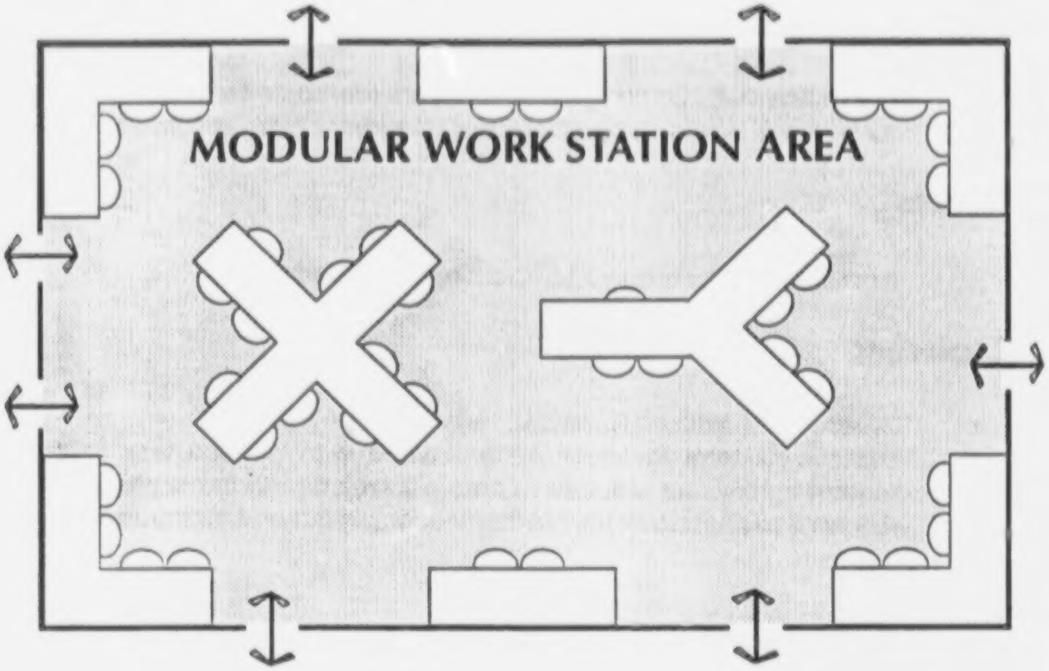
L. Lighting

- Fluorescent fixtures [polarized lens for glare].
- Provide general fluorescent illumination with general task lighting and accent lighting as required to create a welcoming atmosphere.
- Sensors to shut down lights when not occupied and for intrusion detection.

M. Other Special Needs

- Doors, windows, and access to adjacent areas.

MODULAR WORK STATION AREA


MODULAR WORK STATION AREA

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

IV. A. 2. Consumer and Family Science

A. Description

Consumer and Family Science [formerly home economics] is designed to impact improvement of the quality of environments in which individuals and families function. In the interest of the individual, families and society, universal skills are taught to enhance social, cognitive, economic, emotional, physical health, and well-being.

Career exploration is another major focus of the curriculum. These exploratory experiences encompass careers in child development and teaching; consumer services; family and human services; fashion design, manufacturing, and merchandising; food science, dietetics and nutrition; food service; hospitality, tourism, and recreation; and interior design, furnishings, and maintenance.

The goals of Consumer and Family Science are:

- Students become prepared for their roles as members of families, communities, and society by developing skills for living and earning a living.
- Students develop and use personal, leadership, and citizenship skills that address critical economic and social issues, including but not limited to: worker productivity; balancing work and home responsibilities; parenting skills; child abuse; family violence; and nutrition and wellness.
- Students acquire related academic, occupational, and universal skills for personal life management and work.
- Students reinforce related academic skills through an interdisciplinary approach to learning.
- Students use learning skills and acquired knowledge in relevant, subject-area related, community service projects and activities.

This program area is undergoing change from the traditional home economics to a modular curriculum. Consult with district before finalizing design. It is likely that there will be changes and resemble the Modular Work Station Area described in Section IV. A. 1.

IV. A. 2. Consumer and Family Science

B. Capacity

- 30-35 students
- 1 teacher

C. Activities

- Classroom instruction.
- Students working in teams of 2-6.
- Students working in modules and rotating between modules.
- Food preparation.
- Multi-purpose activities.

D. Space Requirements

- Classroom/lab [approx. 1800 sq. ft.]
- Kitchen area [approx. 600 sq. ft.]
- Outdoor patio area [approx. 700-1000 sq. ft.]

The Consumer and Family Science area would consist of a kitchen area and a multi-purpose area. It is proposed that there be a door between the two areas.

E. Spatial Relationships

- Near Modular Work Station Area.

F. Furniture & Equipment

Consult with curriculum specialist for final list of furniture and equipment.

- Kitchen areas. Six stoves in center island arrangement. Six double compartment sinks, garbage disposals, dishwashers and counter space areas around the perimeter of the room. The kitchen area is approx. 600 sq. ft.
- Two-three refrigerators.
- One washer and one dryer.
- One demonstration kitchen.
- One hot water heater.

IV. A. 2. Consumer and Family Science

F. Furniture & Equipment, cont.

- Cabinetry:

  Kitchen

  - Kitchen cabinets. Island area for stoves, counter and sink area around perimeter.

  Multi-Purpose Area

Paper/supply storage [adjustable shelves]	height: approx. 7' width: approx. 48" depth: approx. 24"
Teacher wardrobe [lockable]	height: approx. 7' depth: approx. 24" width: approx. 24"

  16" adjustable shelves on one side, 8" area for clothes storage on the other side.

Student project storage [cubbies]	height: approx. 7' width: approx. 10' depth: approx. 18"

  Project storage cubicle. Each cubicle approx. 4" X 12" X 18". Approx. 120 cubicles.

- 4 computer work stations with printers & furniture.

- Student desks & chairs.
  - The multi-purpose area should have rectangular tables and separate chairs to facilitate re-arranging desks into large, flat work areas in modular dimensions.
- Teacher desk & chair
- One four-drawer file cabinet [lockable].
- Whiteboard:
  - 4' X 24' [minimum]
- Tackboard:
  - Above whiteboard.
  - As much tackable space as design permits.

IV. A. 2. Consumer and Family Science

G. Electrical/Technology

- 2 video ports/monitors in multi-purpose area.
- 2 voice ports/phones.
- 1 data port near teacher desk/computer.
- 4 data ports for student use/computer.
- Electrical outlets above counters away from sinks.
- 220 outlets where appropriate in kitchen area for stoves, washer & dryer
- Quad outlets adjacent to each data port.
- Electrical outlets for other equipment [audio-visual, recorders, overhead projectors, etc.]
- 2 clocks.
- 2 PA "all call" speakers.

H. Floors

- Vinyl tile in the kitchen and the multi-purpose area.

I. Windows

- Operable windows permitting cross ventilation.
- Blinds with darkening capability.

J. Ceilings

- Acoustical tile.

K. Walls

- Moveable wall in the larger multi-purpose areas adjacent to demo/lecture area [should be acoustical and with an STC rating of 43 or higher].

L. Lighting

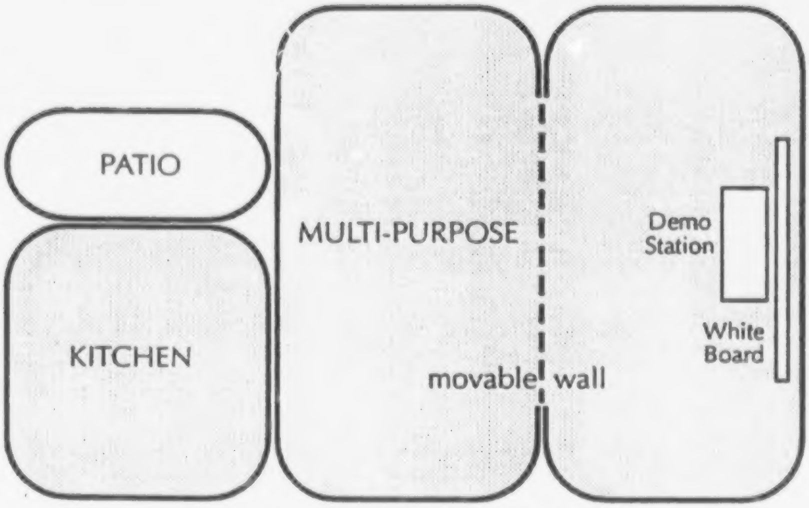
- Fluorescent fixtures [polarized lens for glare].
- Provide general fluorescent illumination with general task lighting and accent lighting as required to create a welcoming atmosphere.
- Sensors to shut down lights when not occupied and for intrusion detection.
- Lighting in conjunction with each kitchen.

IV. A. 2. Consumer and Family Science

M. Other Special Needs

- Appropriate ventilation for stoves.
- Before finalizing design, consult district specialist for curriculum changes.

CONSUMER AND FAMILY SERVIC


PATIO
KITCHEN
MULTI-PURPOSE
movable wall
Demo Station
White Board

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

IV. A. 3. Demo/Lecture Area

A. Description

The demo/lecture area is similar to a regular classroom space. The purpose of the area is to provide space to accommodate group lectures and instructional demonstrations. This area should be configured like a regular classroom.

For detailed description see Section I. A. 1. Classroom [regular].

E. Spatial Relationships

- Adjacent to Modular Work Station Area with window[s] and door between the two areas.
- Adjacent to Consumer and Family Science Multi-Purpose Lab with movable wall between two areas.
- Double wide door between Demo/Lecture Area and Modular Work Station Area.

F. Furniture & Equipment

- One demo bench with lockable storage underneath [3'x 8'].
- See Regular Classroom for additional description.

IV. A. 4. Power Tool Room

A. Description

The power tool area is to be a small "shop" area with power tools to construct projects and prototypes.

B. Capacity

- 8-10 students.

C. Activities

Students will use small power tools to construct projects as part of a problem-solving activity.

- Workbench activities.

D. Space Requirements

- Approx. 400 sq. ft.

E. Spatial Relationships

- Adjacent to Modular Work Station Area. Must have window and door between the two areas to facilitate supervision.

F. Furniture & Equipment

- One 4' x 8' workbench in center of room.
- Counter space on three walls suitable for mounting small power tools. One 3' deep, 30" high work bench around the perimeter of the room with 2 wood vises and 2 machinist vises.
- 1 small bench-mounted sander.
- 1 small bench-mounted press.
- 1 small bench-mounted band saw.
- 1 small bench-mounted scroll saw.
- 2 shop vacs.
- 1 compressed air outlet [or compressor in room].
- Dust collection/exhaust system as may be required.
- Whiteboard: 4' X 4' [minimum].
- Tackboard:
    - Above whiteboard/determined by layout

IV. A. 4. Power Tool Room

G. Electrical/Technology

- 20 amp. wiremold, 4-6 inches above counter tops 24" CTRS.
- 1 AC drop over workbench approximately 24" above work surface.

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting cross ventilation.
- One large window between Power Tool Room and Modular Work Station Area to assist in supervision.

J. Ceilings

- Acoustical tile.

K. Walls

- Acoustically appropriate.

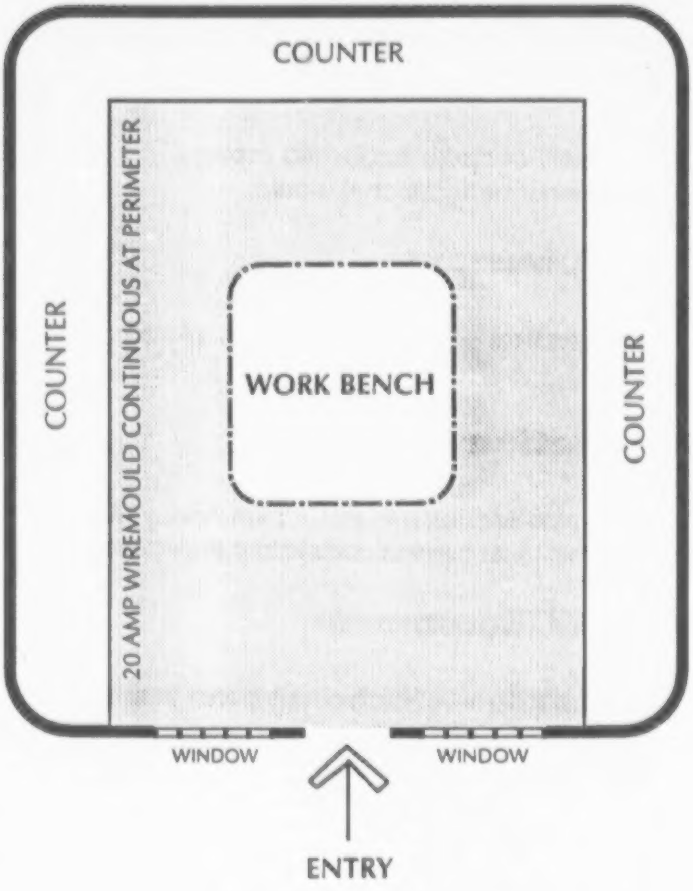
L. Lighting

- Indirect lighting to avoid glare.

M. Other Special Needs

- Sound treatment between power tool room and adjacent learning areas.
- Dust and exhaust treatment.

POWER TOOL ROOM


COUNTER
COUNTER
20 AMP WIREMOULD CONTINUOUS AT PERIMETER
WORK BENCH
COUNTER
WINDOW
WINDOW
ENTRY

MODULAR WORK STATION AREA

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Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

IV. A. 5. Audio\Video Room

A. Description

The audio and video work area is where students will engage in learning to produce short audio and video productions as part of a group project.

B. Capacity

- 8-10 students.

C. Activities

- Production of audio and video projects.
- Production of educational media.

D. Space Requirements

- Two areas that are divisible [approx. 180 sq. ft. for audio and 220 sq. ft. for video].

E. Spatial Relationships

- Adjacent to Modular Work Station Area. Must have a window and door between the two areas to facilitate supervision.

F. Furniture & Equipment

- Approx. 3'x 10' - 30" high counter area in audio area and lockable storage.
- Approx. 3'x 5' - 30" high counter area in video area and lockable storage.
- Back drop on wall in video area.
- Video production and editing equipment.
- Audio production and editing equipment.

G. Electrical/Technology

- 20 amp. wiremold above counter areas and one perimeter wall in each area [video and audio]. Wiremold should have slots for data, video and electrical.

H. Floors

- Vinyl tile.

IV. A. 5. Audio\Video Room

I. Windows

- Operable windows permitting cross ventilation.
- One large window between Audio/Video Room and Modular Work Station Area to assist in supervision.

J. Ceilings

- Acoustical tile.

K. Walls

- Acoustically appropriate [STC rating of 43 or higher].

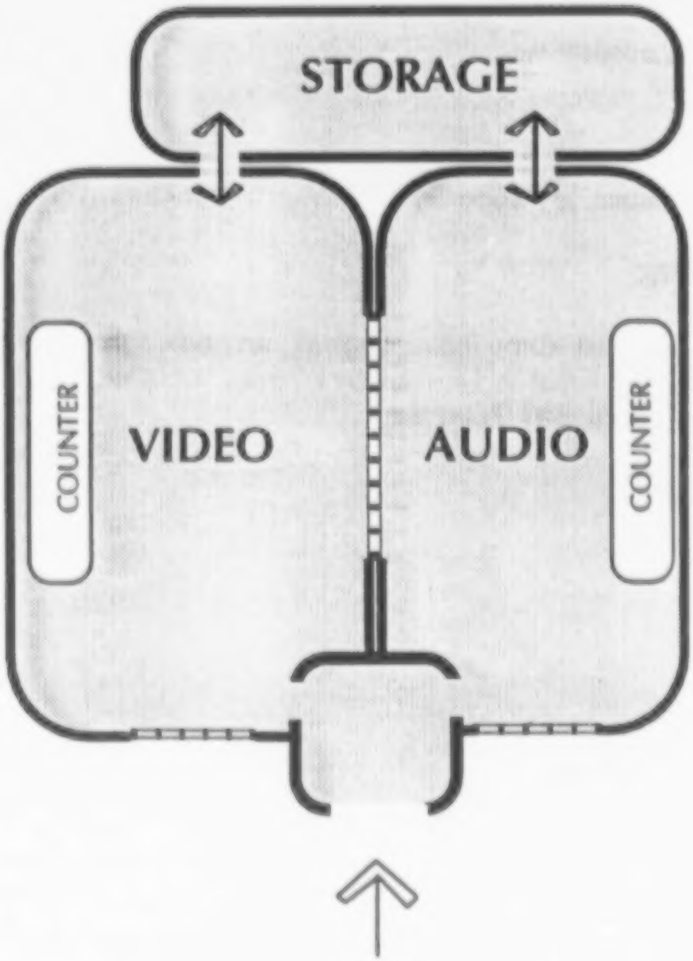
L. Lighting

- Consider some indirect lighting and task lighting to avoid glare.

M. Other Special Needs

- None.

AUDIO VIDEO WORK AREA


STORAGE
VIDEO
AUDIO
COUNTER
COUNTER
ENTRY

MODULAR WORK STATION AREA

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

IV. A. 6. Student Work Room

A. Description

The Student Work Room is an area for students in cooperative groups to work on projects at tables.

B. Capacity

- 25 students.

C. Activities

- Project work area.
- Cooperative team planning area.

D. Space Requirements

- Approx. 600 sq. ft.

E. Spatial Relationships

- Adjacent to Modular Work Station Area. There should be no wall between the Modular Work Station Area and the Student Work Room.

F. Furniture & Equipment

- Six [6] dia. tables and 24 student chairs.
- 4' x 12' whiteboard [minimum].

G. Electrical/Technology

- Standard AC wall outlets around perimeter of room.

H. Floors

- Carpet.

IV. A. 6. Student Work Room

I. Windows

- Operable windows permitting cross ventilation.

J. Ceilings

- Acoustical tile.

K. Walls

- Acoustically appropriate [STC rating of 43 or higher].

L. Lighting

- Fluorescent.

M. Other Special Needs

- None.

IV. A. 7. Computer Room

A. Description

The computer room is to support student computer-based projects. They may include activities for business education, keyboarding, CADD, and a variety of exploratory programs that require a computer lab classroom. Even though there is a great deal of technology identified within each classroom and the project classrooms within each house, there is still a need for an area for additional School-to-Work Transition programming, business applications, and keyboarding. This area would be configured primarily as a small computer lab.

B. Capacity

- 12-15 students.
- 1 teacher.

C. Activities

- Subject areas to be addressed:
    - Keyboarding
    - Business Education
    - Computer Aided Design
    - Word Processing Lab
    - Desktop Publishing.

D. Space Requirements

- Approx. 500 sq. ft.

E. Spatial Relationships

- Adjacent to Modular Work Station Area with a door between the areas.
- Window between areas.

F. Furniture & Equipment

- 12-15 computer work stations [configured around the perimeter of the room and free standing computer lab layout].
- Teacher desk & chair and computer work station.
- One file server [networked with other file servers in building].
- 3-5 printers.

IV. A. 7. Computer Room

F. Furniture & Equipment, cont.

- Whiteboard: 4' X 8' [minimum]
- Tackboard:
    - Above whiteboard
    - As much tackable space as design permits

G. Electrical/Technology

- 1 video port/monitor.
- 1 voice port/phone.
- 12-15 data ports for computers and printers.
- Use raceway wiremold system for electric and data around perimeter of room and floor conduit [equivalent of one quad outlet per work station]
- Patch panel for networking computers may be required in this area or in Modular Work Station Area.

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting cross ventilation.
- One large window between Computer Room and Modular Work Station Area to facilitate supervision.

J. Ceilings

- Acoustical tile.

K. Walls

- Acoustically appropriate [STC rating of 43 or higher].

L. Lighting

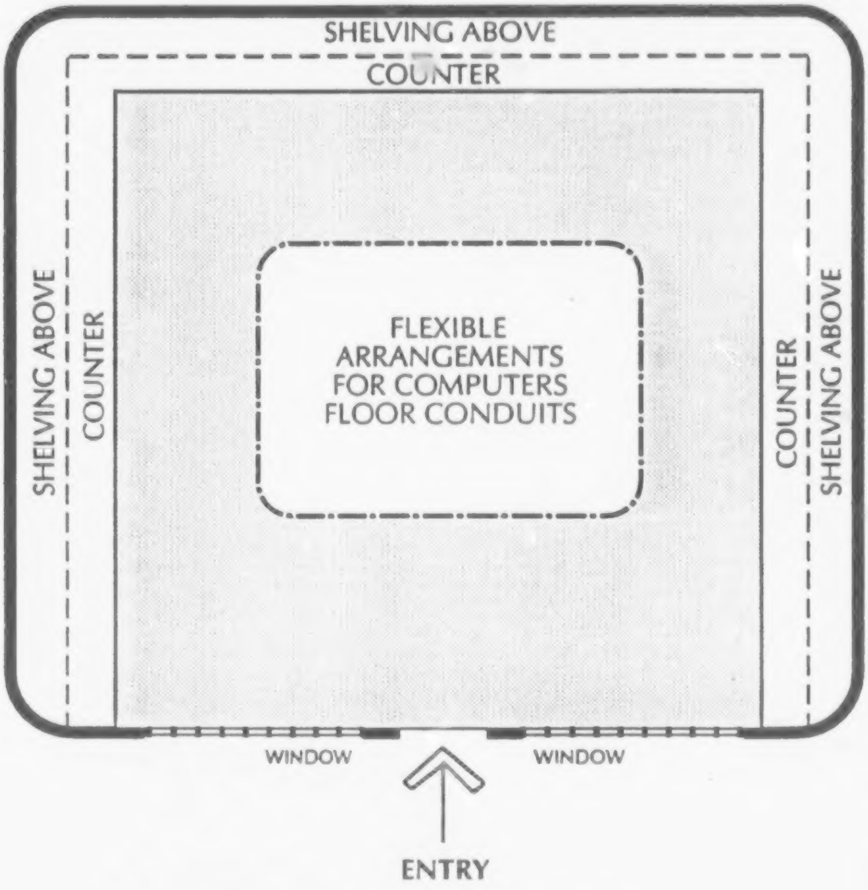
- Indirect lighting or fluorescent polarized lens for glare.
- Provide general fluorescent illumination with general task lighting and accent lighting as required to create a welcoming atmosphere.
- Sensors to shut down lights when not occupied and for intrusion detection.

IV. A. 7. Computer Room

M. Other Special Needs

- Dedicated electrical circuit for computers.
- Consider air-conditioning room.
- Orientation of window[s] to avoid glare.

COMPUTER ROOM


SHELVING ABOVE
COUNTER
SHELVING ABOVE
COUNTER
FLEXIBLE ARRANGEMENTS FOR COMPUTERS FLOOR CONDUITS
COUNTER
SHELVING ABOVE
WINDOW
WINDOW
ENTRY

MODULAR WORK STATION AREA

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

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IV. A. 8. Storage/Supply Room

A. Description

The area is to store supplies and larger projects for the entire center.

B. Capacity

- None.

C. Activities

- Project storage and supplies.

D. Space Requirements

- Approx. 400 sq. ft.

E. Spatial Relationships

- Adjacent to Modular Work Station Area.
- Dutch door between areas.

F. Furniture & Equipment

- Counter space on three walls.
- Lockable storage on perimeter of room.
- Storage above and below counters.
- Rack and shelf type storage in center of room.

G. Electrical/Technology

- 20 amp wiremold 4-6" above counter. 4' CTRS.

H. Floors

- Vinyl tile.

I. Windows

- None.

IV. A. 8. Storage/Supply Room

J. Ceilings

- No special requirements.

K. Walls

- No special requirements.

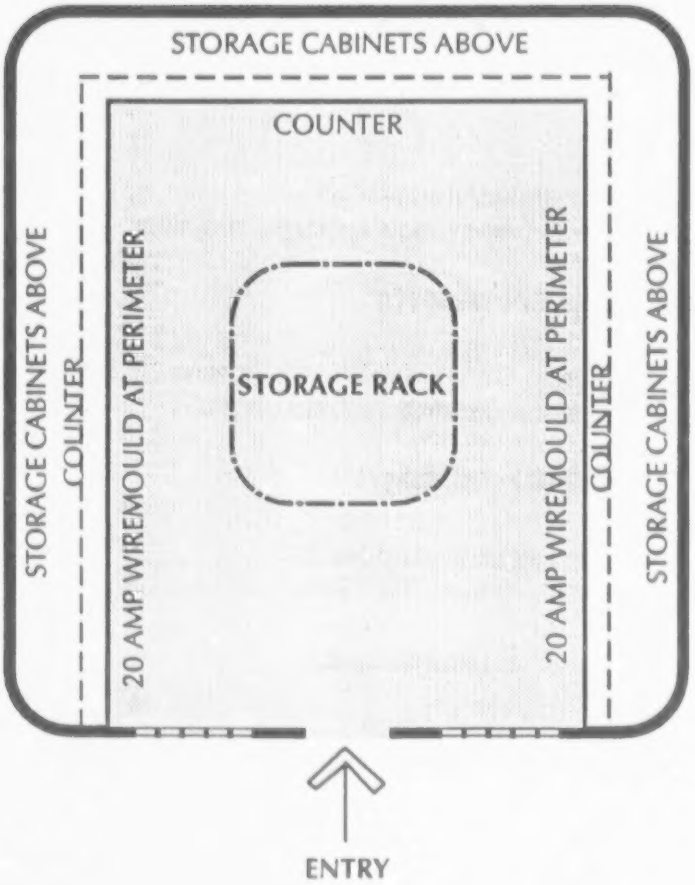
L. Lighting

- No special requirements.

M. Other Special Needs

- None.

STORAGE / SUPPLY ROOM


STORAGE CABINETS ABOVE
COUNTER
STORAGE CABINETS ABOVE
COUNTER
20 AMP WIREMOULD AT PERIMETER
STORAGE RACK
20 AMP WIREMOULD AT PERIMETER
COUNTER
STORAGE CABINETS ABOVE
ENTRY

MODULAR WORK STATION AREA

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Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

IV. A. 9. Outdoor Work Areas

A. Description

Two outdoor work areas or patios have been identified [one for the Family and Consumer Sciences and a second for the Power Tool Area].

B. Capacity

- Groups of students.
- Individual work areas.

C. Activities

- Student projects and meetings.
- Work with power tools on larger projects.

D. Space Requirements

- Family and Consumer Science [approx. 500-700 sq. ft.]
- Power Tools [approx. 400-500 sq. ft.]

E. Spatial Relationships

- Adjacent to Multi-Purpose Lab.
- Adjacent to Power Tool Room.

F. Furniture & Equipment

- Work table [approx. 30 sq. ft.]
- Cold water & drain.

G. Electrical/Technology

- AC power.

H. Floors

- No special requirements.

IV. B. Band/Choral Room

A. Description

The Band/Choral Room will be used for band, orchestra and choral instruction. This area will be supplemented by an office, instrument storage room, and practice rooms. Close attention should be paid to acoustics.

The Band/Choral Room should be located near the stage, large group area, and outdoor amphitheater in order for these facilities to be used to support the program.

B. Capacity

- 30-100 students.
- 1 teacher.

C. Activities

- Band & instrument instruction.
- Choral instruction.
- Orchestra instruction.
- Large group activities or ensembles.

D. Space Requirements

- Band/choral room [1,800 sq. ft.]
- Instrument storage [350 sq. ft.]
- Music office [200 sq. ft.]
- Practice rooms [100 sq. ft.]

E. Spatial Relationships

- Adjacent to stage.
- Adjacent to large group room.
- Near academic houses.
- Separate from offices and program areas that might be distracted by sound.

IV. B. Band/Choral Room

F. Furniture & Equipment

- Band/Choral Room
    - Posture correct chairs
    - Music stands
    - Piano
    - Risers [in sections and moveable]
    - Music stands
    - Piano
    - Electronic equipment
        - --amplifiers
        - --mixers
        - --computer equipment
    - 4 four-drawer file cabinets [lockable]
    - Lockable cabinet [approx. 6' high X 3' wide X 24" deep for electronic equipment with adjustable shelves]
    - Whiteboard or chalkboard [24' half with permanent music staff]
    - Tackboard [above whiteboard]

- Storage Area
    - Storage for approximately 100 instruments

- Office
    - 2 teacher desks
    - 4 four-drawer file cabinets
    - 1 computer work station
    - 1 phone
    - Teacher wardrobe [lockable]
      height: approx. 7'
      depth: approx. 24"
      width: approx. 24"

      16" adjustable shelves on one side, 8" area for clothes storage on the other side.

    - Paper/supply storage [adjustable shelves]
      height: approx. 7'
      width: approx. 48"
      depth: approx. 24"

G. Electrical/Technology

- Band/Choral Room
    - 2 video ports/monitors
    - 1 voice port/phone
    - 2 data ports
    - Electrical outlets for electronic equipment
    - Electrical outlets for audio visual presentations
    - PA "all call" speakers
    - Consider built-in sound system for this room
    - 1 clock

- Storage Area
    - 2-3 electrical outlets

- Office
    - Quad outlet for computer
    - 1 data outlet/computer
    - 1 voice outlet/phone
    - Electrical service on each wall

H. Floors

- Vinyl tile

I. Windows

- Operable windows permitting cross ventilation [may need to be high windows].
- Blinds with darkening capacity.
- Window between office and band/choral room to facilitate supervision.

J. Ceilings

- Selection based on acoustical appropriateness.

K. Walls

- Material based on acoustical appropriateness.

IV. B. Band/Choral Room

L. Lighting

- Lighting appropriate to create suitable atmosphere.
- Ample lighting to read music.

M. Other Special Needs

- Wide door to exterior for large musical instruments.
- Attention given to acoustics.

IV. C. Art Room

A. Description

The art room is to serve a broad comprehensive instructional program that incorporates the four disciplines of art education: aesthetics, criticism, art history, and art production. The art room is proposed to resemble an art studio. Art instruction is also proposed to occur on an interdisciplinary basis in the project classrooms in each of the houses.

B. Capacity

- 30 students
- 1 teacher

C. Activities

- A variety of lecture, 2-D and 3-D art production
    - Drawing, designing, painting & lettering
    - Ceramics & sculpture
    - Printmaking
    - Fiber design
    - Computer aided design

D. Space Requirements

- Art studio [1500 sq. ft.]
- Storage room [200 sq. ft.]
- Outdoor patio [1000 sq. ft.]
- Display areas located throughout the building

E. Spatial Relationships

- Near the academic houses

F. Furniture & Equipment

- Strongly suggest moveable furniture to maximize flexibility

- Sinks:
    - 4 deep single compartment stainless steel with clay traps and paper and soap dispensers

F. Furniture & Equipment [cont'd]

- Cabinetry:
  - Counter area for sinks
    height: approx. 36"
    depth: approx. 30"
    width: approx. 16-20'
  - Teacher wardrobe [lockable]
    height: approx. 7'
    depth: approx. 24"
    width: approx. 24"

    16" adjustable shelves on one side, 8" area for clothes storage on the other side.
  - Paper/supply storage [adjustable shelves]
    height: approx. 7'
    width: approx. 48"
    depth: approx. 24"
  - Counter area for sinks
    height: approx. 36"
    depth: approx. 30"
    width: approx. 16-20'
  - Student project storage [cubbies]
    height: approx. 7'
    width: approx. 10'
    depth: approx. 18"

    Project storage cubicle. Each cubicle approx. 12" X 12" X 18". Approx. 60 cubicle.
  - Large paper/art supplies [drawers]
    height: approx. 4'
    width: approx. 3'
    depth: approx. 24"
    drawers: approx. 4" high
- Storage room:
  - Adjustable shelving [open]
    height: approx. 7'
    depth: approx. 24"
    width: determined by design
  - Pegboard for tools [open]
    height: approx. 4'
    width: approx. 4'

F. Furniture & Equipment [cont'd]

- 2-4 desktop publishing work stations with printers & furniture
- Student desks & chairs
    - This classroom should have rectangular tables and separate chairs to facilitate re-arranging desks into large, flat work areas in modular dimensions.
- Teacher desk & chair
- One four-drawer file cabinet [lockable]
- Whiteboard: 4' X 12' [minimum]
- Tackboard:
    - Above whiteboard
    - Large tackboard areas for displaying art work

- Kiln

G. Electrical/Technology

- 1 video port/monitor
- 1 voice port/phone
- 1 data port near teacher desk/computer
- 2-4 data ports for student use/computer
- Quad outlets adjacent to each data port
- Electrical outlets for other equipment [audio-visual, recorders, overhead projectors, etc.]
- Electrical outlets along counter top away from sinks [approx. every 4']
- Electrical outlet for kiln [220]
- 1 clock
- PA "all call" speaker
- Outdoor patio
    - electrical outlet
    - cold water & drain
- Electrical outlet in storage room.

H. Floors

- Vinyl tile .

IV. C. Art Room

I. Windows

- Operable windows permitting cross ventilation.
- Blinds with darkening capacity.
- Pay close attention to glare and orientation of art room to solar orientation.

J. Ceilings

- Acoustical tile.
- Optional open ceiling [design consideration].

K. Walls

- Suitable for displaying art work.

L. Lighting

- Consider indirect lighting.
- Consider alternative lighting to avoid glare from fluorescent fixtures and natural light sources.

M. Other Special Needs

- Special attention to ventilation and lighting.

V. Physical Education Areas

To support the middle school physical education program, a variety of indoor and outdoor areas are required. Indoor areas require regular classrooms and physical education activity areas. Outdoor hard court areas for basketball and racquetball are needed as are soccer and softball fields.

All middle schools students are involved in physical education which translates into 200-300 students each period taking P.E. To take advantage of the local climate, most physical education programs are located outside.

The district does not have a middle school interscholastic program. At most schools, after school sport activities are coordinated by the city parks and recreation department, non-profit organizations, and some school intramural programs.

Physical education activities must be designed and constructed with a focus on community use during non-school hours. There is a high demand for both indoor and outdoor facilities.

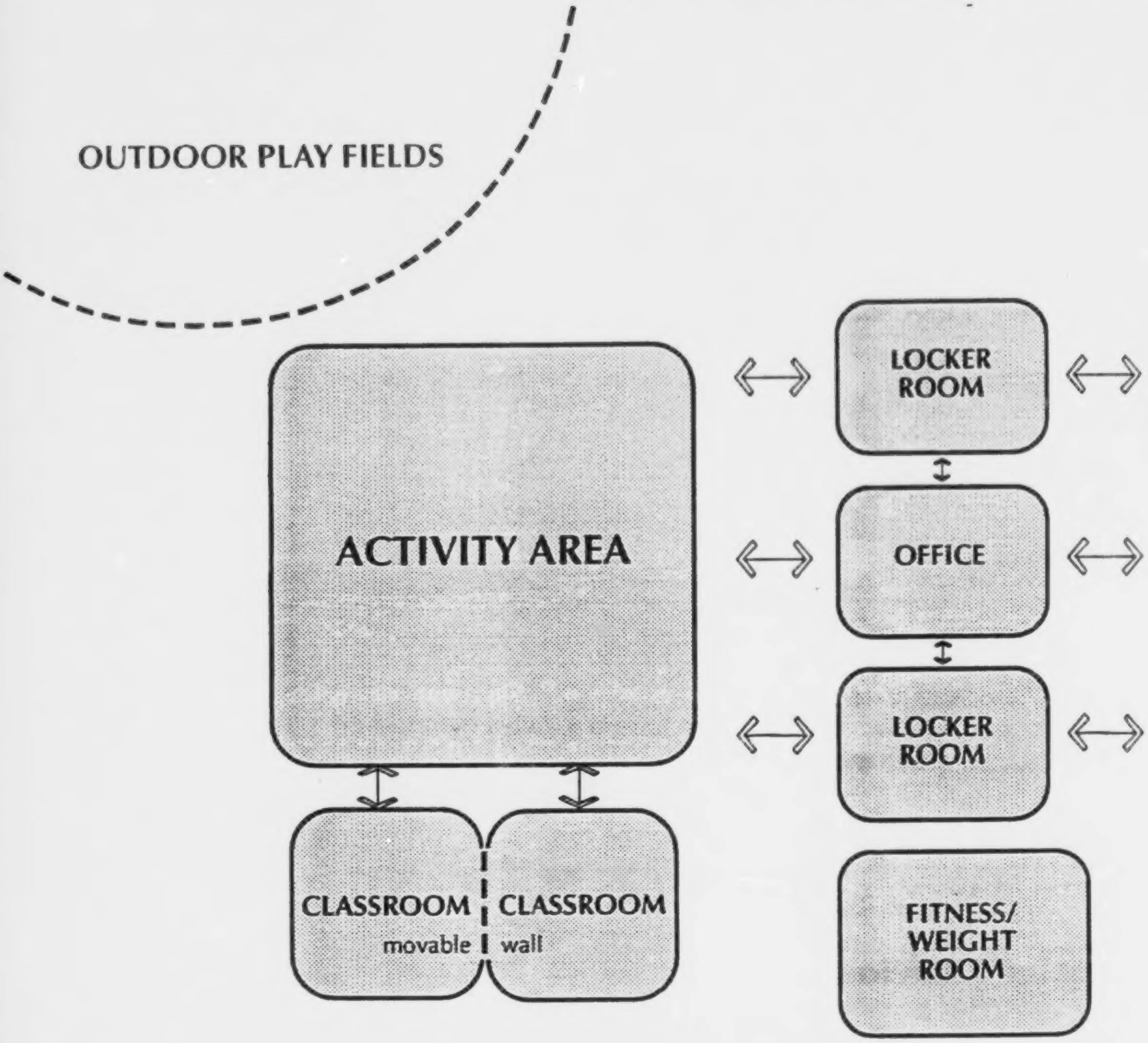
V. Physical Education Spatial Relationships

Most physical education activities should be located apart from the academic house of the middle school. This separation is desired to avoid noise and visual distractions. There should also be clear separation between hard court areas and play fields to foster separate teaching station areas since 6-8 physical education classes will occur simultaneously. There should be easy access to parking and pedestrian walkways which facilitate community use without having to "open" the entire school during non-school hours.

V. Physical Education Space Requirements

Space	Quantity	Sq. Ft.	Total Area
1. Activity Area	1	3000	3000
2. Classrooms	2	960	1920
3. Fitness/Weight room	1	1500	1500
4. P.E. Offices	2	400	800
5. Locker/Showers/Restrooms	2	2900	5800
6. Storage	1	500	500
Total Physical Education			13,520

PHYSICAL EDUCATION


OUTDOOR PLAY FIELDS
ACTIVITY AREA
LOCKER ROOM
OFFICE
LOCKER ROOM
FITNESS/ WEIGHT ROOM
CLASSROOM
CLASSROOM
movable
wall

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

V. 1. Activity Area

A. Description

The activity area should function as an indoor physical education teaching station to accommodate a wide range of indoor recreation and physical education activities. This area is to be a part of the physical education complex that should be physically separated from the academic center of the middle school campus.

B. Capacity

- 30-100 students
- 1-3 instructors

C. Activities

- Aerobics
- Gymnastics
- Floor exercises
- Indoor games that do not require a full size gymnasium
- Large group instruction

D. Space Requirements

- Activity area [3,000 sq. ft.]

E. Spatial Relationships

- Located in the physical education complex.
- Direct access to locker rooms
- Adjacent to classrooms with a large moveable wall, so the classroom area can also become part of the activity area.
- Easy access to community [i.e., parking]

F. Furniture & Equipment

- Physical education equipment
- Whiteboard [4' X 8']
- Tackboard [4' X 8']
- Folding bleachers with a minimum capacity of 100 [possibly]

F. Furniture & Equipment

- Equipment storage room [approx. 150 sq. ft. with shelving approx. 8' wide, 7' high and 14" deep. approx. 2-3' between shelves]
- 4 bars
- 4 benches
- 1 ladder
- 1 folding mirror
- Additional furniture & equipment [consult district staff]

G. Electrical/Technology

- 1 video port for roll-in monitor
- 1 voice port for plug-in phone
- 1 data port for plug-in computer
- Quad outlet adjacent to each data port
- Electrical outlet on each wall
- 1 clock with meshing or other protection
- PA "all call" speakers

H. Floors

- Wood floor [consideration of alternate flooring that is suitable to physical education and recreational activities].

I. Windows

- Operable windows permitting cross ventilation.
- Capability of darkening room for presentations.

J. Ceilings

- Exposed ceiling.

K. Walls

- Durability and safety are the primary concerns [students running into walls; balls; and equipment damaging walls].

L. Lighting

- Energy efficient lighting for large multi-purpose area.
- Key control for all lights.
- Consider metal halide lighting for high bay areas.

M. Other Special Needs

- Consult district on floor stripping for games.
- Large doors to the outside.

V. 2. Classroom

A. Description

The physical education classroom area should support general classroom activities associated with the physical education program. There are 6-8 physical education classes projected to be occurring simultaneously. With this number of classes, there are a variety of activities that require regular classrooms including test taking, fitness & health seminars, and coursework on sports and athletics.

To maximize the versatility of the classroom areas, it is recommended that there be an operable wall between the classrooms to form one large group room. Also, the wall between the classroom and the activity area should be moveable to form one large activity area.

B. Capacity

- 30-40 students
- 1 teacher

C. Activities

- Seminars
- Audio-visual presentations
- Test taking
- Group projects

D. Space Requirements

- Classroom [960 sq. ft.]
- 2 classrooms

E. Spatial Relationships

- Two classrooms adjacent [moveable acoustical wall separating]
- Adjacent to activity area [moveable acoustical wall separating]
- Part of the physical education complex

V. 2. Classroom

F. Furniture & Equipment

- Strongly suggest moveable furniture to maximize flexibility
- Cabinetry:

◆ Under windows. [adjustable shelves/ cabinets]	height: approx. 36" depth: approx. 12" width: as space permits
◆ Paper/supply storage [adjustable shelves]	height: approx. 7' width: approx. 48" depth: approx. 24"

- Student desks & chairs should be stackable and/or easy to move.
- Teacher desk & chair
- Whiteboard: 4' X 24' [minimum]
- Tackboard:
    - Above whiteboard
    - As much tackable space as design permits

G. Electrical/Technology

- 1 video port/monitor.
- 1 voice port/phone.
- 1 data port near teacher desk.
- 4 data ports for student use.
- Quad outlets adjacent to each data port.
- Electrical outlets for other equipment [audio-visual, recorders, overhead projectors, etc.]
- 1 clock.
- PA "all call" speaker.

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting cross ventilation.
- Blinds with darkening capacity.

V. 2. Classroom

J. Ceilings

- Acoustical tile.

K. Walls

- Moveable walls are to be acoustical [STC rating of 43 or higher].

L. Lighting

- Fluorescent fixtures [polarized lens for glare].
- Provide general fluorescent illumination with general task lighting and accent lighting as required to create a welcoming atmosphere.
- Sensors to shut down lights when not occupied and for intrusion detection.

M. Other Special Needs

- Room should be easily converted to other uses through flexible, loose furniture and moveable cabinetry.

V. 3. Fitness/Weight Room

A. Description

The fitness/weight room should function as an indoor physical education teaching area. A major focus of physical education is in developing life-long fitness habits to improve student wellness. Weight room activities provide students with an opportunity to learn how to maintain fitness through a variety of exercises. This room can also be used to evaluate student fitness abilities and to develop exercise programs to meet individual student needs.

B. Capacity

- 30-50 students
- 1-2 instructors

C. Activities

- Muscle toning through various forms of weight lifting and physical exercises.
- Exercises
- Personal student evaluation
- Students rotating through a variety of equipment to build endurance.

D. Space Requirements

- Weight room [1,500 sq. ft.]

E. Spatial Relationships

- Located in the physical education complex
- Near locker rooms
- Near large group area
- Near classrooms

F. Furniture & Equipment

- A variety of stations/equipment:
  - Stationary bikes
  - Tread mills
  - Bench presses

V. 3. Fitness/Weight Room

F. Furniture & Equipment [cont'd]

- A variety of stations/equipment: [cont'd]
    - Free weights
    - Universal equipment
    - Rowing machines
    - Incline presses
    - Scales
- Whiteboard [4' X 8']
- Tackboard [4' X 8']
- Mirrors
- Additional furniture & equipment [consult district staff]

G. Electrical/Technology

- 1 video port/monitor
- 1 voice port/phone
- 1 data port for plug in computer
- Quad outlet adjacent to data port
- Electrical outlets on each wall
- 1 clock
- PA "all call" speakers

H. Floors

- Vinyl tile or alternate flooring that is suitable to weight room functions.

I. Windows

- Operable windows permitting cross ventilation.

J. Ceilings

- Acoustical tile.

K. Walls

- Durability and safety are the primary concerns.

V. 3. Fitness/Weight Room

L. Lighting

- Fluorescent lighting.

M. Other Special Needs

- Suggest room layout similar to a health club fitness center.

V. 4. Physical Education Offices

A. Description

There should be two physical education offices, one for female instructors and one for male instructors. These offices should be equipped with typical office furnishings and restrooms/showers for staff. They should be adjacent to each other and each should be located adjacent to the corresponding boys' and girls' locker rooms.

Another option is to locate the physical education offices within the cluster areas to provide opportunity for integration of programs.

B. Capacity

- 3-4 instructors will use each office.

C. Activities

- Planning and scheduling.
- Recordkeeping/administrative paperwork.
- Changing clothes and showering.

D. Space Requirements

- Each office/shower/restroom area [approx. 400 sq. ft.]
- Two areas [one male, one female].

E. Spatial Relationships

- Two offices should be located adjacent or near each other.
- Each office should be located adjacent to the corresponding locker room with a large window to facilitate supervision.

F. Furniture & Equipment

- In each office area:
  - Four desks
  - Five chairs
  - Two four-drawer file cabinets [lockable]
  - One phone
  - One computer work station

V. 4. Physical Education Offices

F. Furniture & Equipment [cont'd]

- In each shower restroom area:
    - Five lockable lockers [6' high X 18" wide X 18' deep]
    - One shower, hot & cold water, towel bars
    - One separate toilet
    - One lavatory with hot & cold water, soap and paper dispenser, and mirror.
- One whiteboard [approx. 4' X 4']
- One tack board [approx. 4' X 4']

G. Electrical/Technology

- 1 voice port/phone
- 1 data port near computer work station
- Quad outlets adjacent to data port
- Electrical outlets on each wall
- Electrical outlet near lavatory
- 1 clock
- PA "all call" speakers

H. Floors

- Vinyl tile. Tile in shower area.

I. Windows

- Large window between office and locker room that can slide open for supervision and communication.
- Blinds for privacy purposes.

J. Ceilings

- Acoustical tile.

K. Walls

- No special requirements.

V. 4. Physical Education Offices

L. Lighting

- Fluorescent fixtures.
- Appropriate lavatory/restroom fixtures

M. Other Special Needs

- Each office should be lockable.

V. 5. Locker Rooms

A. Description

Student locker rooms are used by students to dress and shower before and after physical education classes. In a middle school with 1,500 students, 200-300 students may be involved in physical education each period or 75-150 students in each boys' and girls' locker rooms. The district does not have an interscholastic sports program which negates the need for permanent individual lockers for students. It is anticipated that lockers will be shared.

Showers are required by code, even though middle school students rarely take showers after physical education classes. Suggestions have been made to improve the privacy of showers which may increase shower usage.

Because of extensive use and at times abuse, the locker rooms should be designed with durable lockers and equipment and with a layout that facilitates easy supervision.

B. Capacity

- 6:1 ratio of physical education lockers. Each locker room needs 125 full lockers. [One street locker will be shared by six students--1 student each period].
- 750 basket lockers.

C. Activities

- Changing clothes
- Taking showers
- Using the restroom

D. Space Requirements

- Total locker room area [approx. 2,900 sq. ft. each]
- Actual layout to be determined by design but needs to include:
  - Dressing/locker area
  - Shower area
  - Toilet area
  - Supply room
  - Custodial closet

V. 5. Locker Rooms

E. Spatial Relationships

- Located in the physical education complex.
- Direct access outside, two way to minimize congestion.
- Direct access to activity room
- Adjacent to instructor's office

F. Furniture & Equipment

- 750 basket-type lockers plus 125 street lockers in each locker room. There are many arrangements that can be used [double stack: 36" height X 9" wide X 18" deep; single stacked; or basket-type lockers].
- Integrated concrete base bench.
- Mirrors in locker room.
- A minimum of 30 shower heads with soap dispensers. Consider privacy areas within in each shower area.
- Adjustable shelving in supply room for towels, equipment such as bats, balls, tennis rackets, paddle balls, etc.
- Lockable storage cabinets for equipment.
- One large washer and one large dryer.
- Counter top in supply room for distribution of towels and equipment with operable opening [window or meshing].
- A minimum of 6 water closets/urinals and lavatories in each toilet room with appropriate equipment such as soap and towel dispensers, mirrors, etc.
- Consider using hot air blowers in drying area and toilet room.
- Whiteboard [4'- 8']
- Tackboard [8'- 12']

G. Electrical/Technology

- Electrical outlets appropriately located in locker room, toilet room, and storage/supply room.
- 1 clock [meshing or protective covering]
- PA "all call" speakers
- Intercom between office and locker room.

V. 5. Locker Rooms

H. Floors

- Terrazzo flooring. [Consider anti-skid surfaces, consideration of alternate flooring that is suitable to locker room facilities]
- Floor drains where appropriate.

I. Windows

- Operable windows permitting cross ventilation.

J. Ceilings

- Plaster or suitable material for high humidity areas.

K. Walls

- Durability is primary concern. Terrazzo or suitable alternate in shower area.

L. Lighting

- Flush or surface mounted fixtures with protective guards.
- Key control for all lights.

M. Other Special Needs

- Ventilation for the entire locker room especially toilet and shower areas.
- Circulation flow and supervision.

V. 6. Storage Room

A. Description

The purpose of the is area is to provide storage for physical education equipment. Most of the equipment will be large apparatus.

D. Space Requirements

- Storage area [500 sq. ft.]

E. Spatial Relationships

- Adjacent to activity room.

F. Furniture & Equipment

- Wrestling mats.
- Bulk athletic equipment.
- Supply storage
    - Adjustable shelving [open]
        height: approx. 7'
        depth: approx. 18-24"
        width: determined by design
- Gymnastics equipment.

G. Electrical/Technology

- Electrical outlet.

H. Floors

- Vinyl tile.

I. Windows

- None.

J. Ceilings

- No special instructions.

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V. 6. Storage Room

K. Walls

- No special instructions.

L. Lighting

- Flush ceiling mounted.

M. Other Special Needs

- Large doors to activity room. Possible access to outside.

VI. Library/Media Center

The library/media center will serve as the media hub of the building. This area is changing from a "depository of books" to a "high technology information distribution center." It is not projected that the library functions will discontinue, instead digital technology will enhance voice, video, and data communications within the middle school, between district facilities, and with distant learning resources.

Many of the resources traditionally found in a library such as card catalogs, periodicals, encyclopedias, and dictionaries will be replaced and/or enhanced by technological devices. There will be an increase in use of multi-media for creating student projects and instructional material.

It is also proposed that the technology control room be incorporated into the library/ media center that would house the video networking, data networking, and phone systems to be used throughout the building.

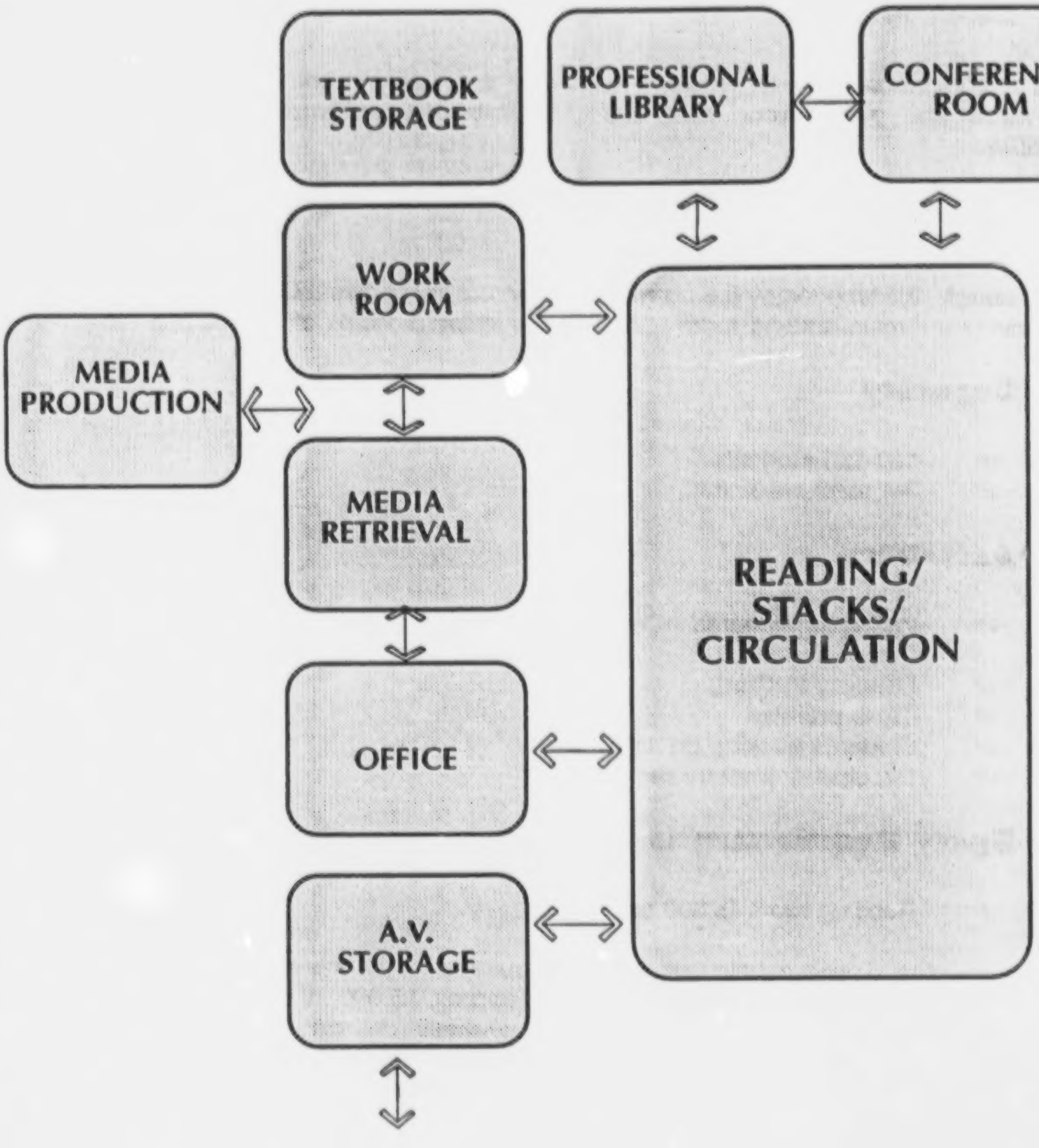
VI. Library/Media Center Spatial Relationships

The library/media center should be located in the center of the middle school campus with easy access to the academic houses. The center of the campus location should facilitate easy access by students and staff. This location will reduce the cost of installing building-wide technology networking. Easy community access should also be considered as well as potential expansion for joint use arrangements between the San Diego Unified School District and the City of San Diego.

VI. Library/Media Center Space Requirements

Space	Quantity	Sq. Ft.	Total Area
1. Reading Room/stacks/ circulation counter	1	5500	5500
2. Workroom	1	700	700
3. Media Production Room	1	700	700
4. Office area	1	300	300
5. Small group/conference	1	500	500
6. Textbook storage	1	400	400
7. A.V. storage	1	300	300
8. Media retrieval center	1	500	500
9. Professional library	1	400	400
Library/Media Center			9,300

LIBRARY / MEDIA CENTER


TEXTBOOK STORAGE
PROFESSIONAL LIBRARY
CONFERENCE ROOM
WORK ROOM
MEDIA PRODUCTION
MEDIA RETRIEVAL
READING/ STACKS/ CIRCULATION
OFFICE
A.V. STORAGE

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

VI. 1. Reading Room

A. Description

The reading room typically includes the areas for students and staff to engage in individual and group work, main book, audio-visual, multi-media collection, and circulation.

A variety of layouts for the reading room will need to be analyzed during the design phase of the project.

Increasingly, the technology [i.e., computers, printers, laser disc & CD Rom devices] are located in the main reading room rather than in isolated rooms off the reading room.

B. Capacity

- 100-120 students
- 3-4 teachers & staff

C. Activities

- Individual research
- Group research
- Reading/studying
- Class projects
- Students working on computers
- Circulation of resources

D. Space Requirements

- Reading room [5,500 sq. ft.]

There are several ways of calculating space requirements for this area. One method is based on the number of volumes to be housed [approx. 15,000], the number of persons using the media center [100-120], and related activities [i.e., circulation and computer activities, etc.] The suggestions for middle schools range from 25-40 sq. ft. per occupant to address the area required for stacks, seating, circulation, and related functions.

Area is needed for circulation, stacks, individual projects, group projects, card catalog, multi-media work stations, and related functions. The layout of the area should be developed by the architect and library/media specialist during the design phase.

E. Spatial Relationships

- Direct access to the exterior.
- Direct access to library/media specialist office.
- Adjacent and access to the other areas identified in the library/media center. [All library/media center support spaces should have direct access to the reading room.]

F. Furniture & Equipment

- Tables, chairs, and work stations to seat 100-120 persons.
- Stacks to accommodate approx. 15,000 books. Typically there are approx. 8 books per one linear foot of shelving. This would translate into approx. 1,875 feet of shelving. Most shelving is approx. 14" in height and not greater than 6' in height. Often lower free standing shelving is used to improve supervision. [ADA considerations must be applied].
- Shelving appropriate for reference material [i.e., encyclopedias and atlases] as well as appropriate shelving for periodicals.
- Approx. 6 terminals for card catalog purposes [networked to library/media center file server and district data resources]
- Approx. 20-25 multi-media work stations. This would include a combination of computers, printers, laser discs, CD-Rom and other multi-media devices. [Networked where appropriate, capability of accessing additional resources in media retrieval room, and modem access to outside resources.]
- Circulation desk outfitted for automated circulation with counter space and shelving under counter.
- Two phones on circulation counter
- Copy machine.
- Book carts.
- Displays areas for art projects and library/media center functions.
- Specialized library furniture [i.e., dictionary/atlas stands, newspaper racks, index tables, PAC tables].

G. Electrical/Technology

- Multiple voice ports/2 phones.
- 2 data ports/computers/modem at circulation desk.
- Data port for each work station.
- Detection system.
- Quad outlets adjacent to each data ports.

G. Electrical/Technology [cont'd]

- Electrical outlets for devices such as microfiche readers, printers, etc.
- Electrical outlets for audiovisual equipment and presentations
- 2-3 video ports with monitors strategically located
- PA "all call"
- Clocks where appropriate
- Additional video ports for accessing VCR's, satellite communication, cable TV and ability to roll mobile monitor to selected locations for smaller group viewing or individual project work.
- Use of floor conduit, power poles, raceway/wiremold systems to configure data and electrical requirements. Power should be adequate and flexible.
- NOGO security system for all books.

H. Floors

- Carpet. Consider carpet squares for easy replacement.

I. Windows

- Operable windows permitting cross ventilation. May require higher windows to provide area for shelving [consider air-conditioning].
- Blinds with darkening capacity.
- Solar orientation should avoid heat gain from natural light source.

J. Ceilings

- To be determined by design.

K. Walls

- Acoustically appropriate.
- Wall-hung shelving.

L. Lighting

- A variety of lighting will be required to perform the functions of this area; likely to include indirect lighting, task lighting, and general purpose lighting. Separate light switches will be needed for controlling different areas of the room.

M. Other Special Needs

- Security factors to detract theft. [i.e., motion detectors, limited access from exterior, detectors at entrance/exit].
- This area will have limited staff which requires appropriate layout for easy supervision.

VI. 2. Workroom

A. Description

Adjacent to the reading room, the workroom provides space for receiving, processing, and repairing print material and textbooks.

B. Capacity

- 4-10 persons

C. Activities

- Receiving & processing library and text material.
- Maintaining inventory and records.

D. Space Requirements

- Workroom [700 sq. ft.]

E. Spatial Relationships

- Adjacent to textbook storage or in same room.
- Access to reading room.
- Near media retrieval office.

F. Furniture & Equipment

1 sink with hot & cold water	
One counter area [shelving under] and above	Height: approx. 36" Depth: approx. 24" Width: approx. 20'
Computer work station and chair	
Shelving area Combination of open & lockable	Height: approx. 7' Depth: approx. 24" Width: as design permits
2 large work tables [approx. 4' X 8']	

VI. 2. Workroom

F. Furniture & Equipment [cont'd]

- 1 phone
- 6-8 chairs, 2-4 stools
- Tack space [approx. 4' X 4']
- Typewriter
- Shelf list cabinet [optional].

G. Electrical/Technology

- 1 voice port/phone.
- 1-2 data ports near desk/computer.
- Quad outlets adjacent to each data port.
- Computers for text inventory and circulation.
- Electrical outlets on each wall.
- Electrical outlets above counter.
- 1 clock.
- PA "all call" speaker.

H. Floors

- Vinyl tile.

I. Windows

- Operable windows permitting cross ventilation.
- Large window between workroom and reading room for supervision.

J. Ceilings

- Acoustical tile.

K. Walls

- Wall-hung bookshelves.

L. Lighting

- Fluorescent fixtures & counter lighting where appropriate.

M. Other Special Needs

- Student access to exterior textbook issue windows which are easily secured with a shelf on the student side.
- Staff restroom[s].

VI. 3. Media Production Room

A. Description

The media production room is an area to create multi-media projects. This usually consists of high-end technology which is too expensive for the building to have multiple units. Increasingly, students as well as staff will use this area since students are and will be encouraged to become involved in project-based curricular activities and portfolio development.

B. Capacity

- 10-15 persons

C. Activities

- Development and repair of print resources.
- Production: paper cutter, laminator, lettering, etc.
- Desktop publishing.
- Multi-media projects.
- Video editing.
- Audio editing.
- Still video editing.

D. Space Requirements

- Multi-media workroom [700 sq. ft.]

E. Spatial Relationships

- Adjacent to reading room
- Access to media retrieval room
- Near media office

F. Furniture & Equipment

- Multi-media equipment
    - Playback S-VHS recorders
    - Graphics computer
    - Video monitor
    - Genlock generator
    - Still video player/recorder

F. Furniture & Equipment [cont'd]

- Multi-media equipment [cont'd]
    - Visual presenter [camera/lights]
    - PC video to standard TV converter
    - Multi-media computers
    - Camcorders
    - Still video cameras
    - Dry mount
    - Laminator

- Furniture for multi-media equipment
    - 4-5 tables [30" X 60"]
    - 1-2 video editing tables with shelf above [30" X 60"]
    - 2-3 computer work stations and furniture

Shelving area Combination of open & lockable	Height: approx. 7' Depth: approx. 24" Width: as design permits
One counter area [shelving under and above]	Height: approx. 36" Depth: approx. 24" Width: approx. 20'

- 1 phone
- 10-15 chairs/stools
- Tack space [approx. 4' X 4']

G. Electrical/Technology

- 1 voice port/phone
- 3-4 video ports
- Raceway/wiremold around perimeter of room for electrical and data networking
- Hard wired to media retrieval room
- Electrical outlets above counter
- 1 clock
- PA "all call" speaker

H. Floors

- Vinyl tile.

VI. 3. Media Production Room

I. Windows

- Operable windows permitting cross ventilation. [Security is essential.]
- Large window between reading room and media production work room to facilitate supervision.

J. Ceilings

- Acoustical tile.

K. Walls

- Neutral color.
- Sound control for recording.

L. Lighting

- Fluorescent fixtures with supplemental task lighting at work stations. [consider indirect lighting to avoid glare on equipment].

M. Other Special Needs

- Strongly consider air conditioning due to heat gain from equipment.
- Security should not be obtrusive but is important. Possibly allow access only from reading room of media center.

VI. 4. Office Area

A. Description

The office area is to be used by the library/media staff. The office will be equipped with typical office furnishings. It should be adjacent to the reading room, near the circulation desk, and in good proximity to the other functions of the library/media center.

B. Capacity

- 2-3 staff.

C. Activities

- Administrative work.
- Making phone calls.
- Planning and scheduling.
- Data entry.
- Collection development.
- On-line ordering.
- Lesson planning.

D. Space Requirements

- Office area [approx. 300 sq. ft.]

E. Spatial Relationships

- Offices should be located adjacent [with a door] to the reading room.
- Near circulation desk with a large window to facilitate supervision.
- Near the other functions of the library/media center.

F. Furniture & Equipment

- 2 desks with 2 chairs
- 2 five-drawer file cabinets [lockable]
- 2 two-drawer file cabinets [lockable]
- 2-4 chairs
- 1 round conference table with 4 chairs.
- 1 wardrobe cabinet [lockable]
- 1 tackboard [approx. 4' X 4']

VI. 4. Office Area

G. Electrical/Technology

- 1 voice port/phone/modem
- 1 data port near computer work station
- Quad outlets adjacent to data port
- Electrical outlets on each wall
- 1 clock
- PA "all call" speakers
- 1 fax machine

H. Floors

- Carpet

I. Windows

- Large window between office and reading room for supervision.
- Blinds for privacy purposes.

J. Ceilings

- Acoustical tile.

K. Walls

- Wall-hung bookshelves on one wall.

L. Lighting

- Fluorescent fixtures.

M. Other Special Needs

- Office should be lockable.
- Separate telephone lines for fax/modem.

VI. 5. Small Group/Conference Room

A. Description

This room will be used by adults and/or groups of students to engage in collaborative research projects and to conduct meetings. It is proposed that this room be divisible into small conference/small group rooms as determined by the size of the groups.

B. Capacity

- 4-25 persons

C. Activities

- Small group research projects.
- Meetings/small seminars.

D. Space Requirements

- Small group/conference room area [500 sq. ft.]
- Room should have capability to be divided at least in half

E. Spatial Relationships

- Access from reading room.

F. Furniture & Equipment

- All furniture moveable
- Several rectangular tables [i.e., 2' X 6' that can form a variety of arrangements].
- 25 chairs
- Whiteboard: 4' X 8' minimum [suggest at both ends of room]
- Tackstrip above whiteboard

G. Electrical/Technology

- Double gang box 18" off floor that contains one [1] video port, one [1] data port, and one [1] phone jack.
- One quad outlet adjacent to the communications outlet

VI. 5. Small Group/Conference Room

G. Electrical/Technology [cont'd]

- Electrical outlets on each wall for other equipment [audio-visual, recorders, overhead projectors, etc.]

H. Floors

- Carpet

I. Windows

- Operable permitting ventilation.
- Blinds with darkening capacity.

J. Ceilings

- Acoustical tile

K. Walls

- Moveable wall should be acoustical.

L. Lighting

- Consider indirect lighting [fluorescent fixtures]

M. Other Special Needs

- None

II. 6. Textbook Storage

A. Description

This is a room to store student textbooks. The library/media center is typically the main depository for student textbooks. This area can be combined with the workroom by enlarging the workroom and providing appropriate shelving.

B. Capacity

- 2-3 persons

C. Activities

- Textbook storage

D. Space Requirements

- Textbook storage room [400 sq. ft.]

E. Spatial Relationships

- Adjacent to library/media workroom
- Easy access for deliveries

F. Furniture & Equipment

- Open shelving
  height: approx. 7' [12" betw. shelves]
  depth: approx. 18"
  width: approx. perimeter of room
- Compact textbook storage, manually operated,

G. Electrical/Technology

- Electrical outlet on each wall.

H. Floors

- Vinyl tile.

II. 6. Textbook Storage

I. Windows

- None.

J. Ceilings

- Acoustical tile.

K. Walls

- Wall-hung shelves.

L. Lighting

- Fluorescent fixtures.

M. Other Special Needs

- None.

VII. 7. A.V. Storage

A. Description

This area is to store A.V. equipment that will be used in the building. Since much of the equipment typically found in a middle school is fixed in the classroom [i.e., monitors] or available through the communications network [i.e., VCRs] the amount of equipment that will be stored here is reduced.

D. Space Requirements

- A.V. storage [300 sq. ft.]

E. Spatial Relationships

- Near library/media office and production room.
- Near circulation desk.
- Access to outside and main library/media center.

F. Furniture & Equipment

- Carts for equipment
- A.V. equipment storage:

❖ Adjustable shelving [open]	height: approx. 7' depth: approx. 24" width: determined by design
❖ Adjustable shelving [open above equipment carts]	height: 5' above floor depth: approx. 24" width: determined by design

G. Electrical/Technology

- Electrical outlets on walls
- One dual data & video port

H. Floors

- Vinyl tile.

I. Windows

- None.

VII. 7. A.V. Storage

J. Ceilings

- Acoustical tile.

K. Walls

- No special instructions.

L. Lighting

- Fluorescent fixtures.

M. Other Special Needs

- A.V. storage room must be lockable.

VI. 8. Media Retrieval Center

A. Description

The purpose of this room is to serve as the main media hub for the entire school. This area will contain the rack of all of the voice, video, and data head-end and distribution equipment.

B. Capacity

- 1-2 persons

C. Activities

- Multi-media distribution
- Location for head-end equipment
- Loading & unloading programs

D. Space Requirements

- Media retrieval center [500 sq. ft.]

E. Spatial Relationships

- Adjacent to media production room.
- Near library/media office.

F. Furniture & Equipment

- 10-12 racks [each rack 6' high X 22" X 22"]
- Interactive audio visual sources:
  - Laser discs
  - VCRs
  - Compact disc interactive
  - Still video players
- Non-interactive sources
  - Cable TV
  - Satellite
  - Electronic bulletin boards
- Network file servers
- Data distribution equipment

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VI. 8. Media Retrieval Center

F. Furniture & Equipment [cont'd]

- Phone switch for entire facility [PBX].
- Video network control.
- Data network system.
- Satellite dish connection.
- UPS power back-up.

Note: District technology office to provide final specifications and vendor to determine layout.

G. Electrical/Technology

- Racks come with electrical outlets supplied by vendor
- Cable trays will be needed throughout the building
- Over a thousand wires will connect in this room for voice, video, and data purposes.
- Adequate power supply will be required and auxiliary power for back-up. [Quality of power is important.]
- This room must be air conditioned.

H. Floors

- Vinyl tile.

I. Windows

- Possible window [must be secure].

J. Ceilings

- Acoustical tile.

K. Walls

- Adequate area for large wall mounted patch panels.

VI. 8. Media Retrieval Center

L. Lighting

- Fluorescent fixtures.

M. Other Special Needs

- Must be air conditioned due to heat gain from equipment.
- Security is very important due to very expensive equipment. Do not want unauthorized persons to enter.

VI. 9. Professional Library

A. Description

The professional library area where teachers and other staff are involved in reading and viewing professional materials. This area is also used for small meetings. It should be comfortable, aesthetically pleasing, and separated from the main reading room.

B. Capacity

- 2-10 staff at one time

C. Activities

- Reading materials
- Developing course work
- Researching topics
- Small meetings

D. Space Requirements

- Professional library [400 sq. ft.]

E. Spatial Relationships

- Adjacent reading room

F. Furniture & Equipment

- Bookshelving around perimeter of room
- Tables & chairs
  - Suggest two to three 4'5' round tables with 4-6 upholstery-covered chairs.
- Informal lounge furniture [soft chairs]

G. Electrical/Technology

- 1 video port
- 1 voice ports/phone
- 1 data port

VI. 9. Professional Library

G. Electrical/Technology

- Quad outlet adjacent data port.
- Electrical outlets strategically located.
- 1 clock.
- PA "all call" speaker.

H. Floors

- Carpet.

I. Windows

- Operable windows permitting cross ventilation.
- Blinds with darkening capacity.
- Suggest window between professional library and reading room to facilitate supervision.

J. Ceilings

- Acoustical tile.

K. Walls

- Wall-hung bookshelves.

L. Lighting

- Fluorescent fixtures [consider indirect lighting].

M. Other Special Needs

- None.

VII. Cafeteria/Performance Area

This area has multiple functions which include cafeteria services, performances, assemblies, and community meetings. It is proposed through creative design of interior and exterior spaces that this area have the ability to house both inside and outside performances. Simultaneously, this area will provide opportunity for indoor eating during inclement weather and open out to an adjoining patio area for outside eating.

In analyzing programming conflicts of sloped flooring for performances and level flooring for cafeteria functions, it was determined that level flooring provides greater flexibility. This flexibility will also provide opportunities to use this area for large group instruction and a potential activity area for physical education.

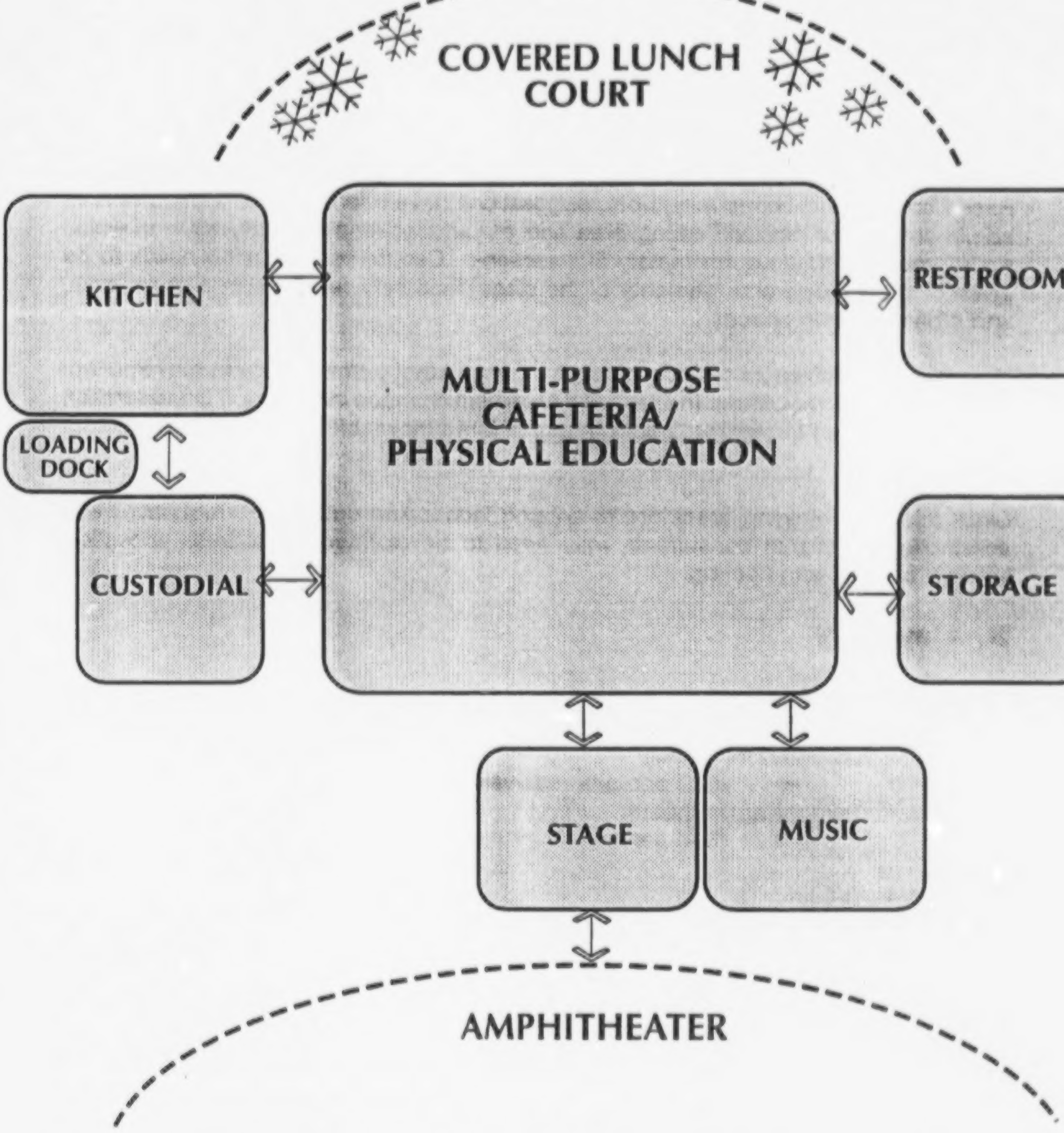
VII. Cafeteria/Performance Area
Spatial Relationships

The cafeteria/performance area should be located in close proximity to parking, delivery access, building administration, and not too far from the academic houses.

VII. Cafeteria/Performance Area Space Requirements

Space	Quantity	Sq. Ft.	Total Area
1. Large Group Area	1	5000	5000
2. Stage	1	1500	1500
3. Amphitheater	1	Outdoor	outdoor
4. Covered Eating Area [4000 X .33]	1	1320	1320
4. Storage	1	500	500
5. Kitchen	1	2500	2500
6. Custodial Work Area	1	1000	1000
7. Staff Dining Room	1	1000	1000
Cafeteria/Performance Area			12,820

CAFETERIA / PERFORMANCE AREA


COVERED LUNCH COURT
KITCHEN
LOADING DOCK
CUSTODIAL
MULTI-PURPOSE CAFETERIA/ PHYSICAL EDUCATION
RESTROOMS
STORAGE
STAGE
MUSIC
AMPHITHEATER

Note: The functional relationships illustrated are diagramatic only. Further interpretation of these relationships shall be implemented by the design architect.

VII. 1. Large Group Area

A. Description

The large group area will serve a wide variety of functions that include: indoor eating area during inclement weather, assemblies, plays and performances, community meetings, large group presentations, and some physical education activities.

Based on staff and community input, suggestions have been made to have this area adjoin an outdoor covered eating area and an outdoor amphitheater, each of which would accommodate approximately 500 persons. Careful consideration needs to be given to the physical arrangements of the stage, food service area, large group area, and other adjoining spaces.

The custodial staff would encourage physical layout that permits efficient movement of tables and chairs that allows for easy and expedient changes in function. Consideration needs to be given to storage, possible use of large moveable doors, and selection of furniture.

Since this and adjoining areas are to support indoor and outdoor performances and assemblies, additional consultants may need to be retained to address acoustics, lighting, staging, and flooring.

B. Capacity

- Large group area
    - 500 persons [equivalent of one house]
- Covered lunch area
    - 500 persons [equivalent of one house]
- Outdoor amphitheater
    - 500 persons

C. Activities

- Lunch/dining functions: three lunch periods, 500 students each [the stage and/or covered lunch area may also be used]
- Plays and musicals
- Assemblies
- Large group instruction
- Community meetings
- Indoor physical education activities

D. Space Requirements

- Large group area [5,000 sq. ft.]
- 4 offices in each house support area

E. Spatial Relationships

- Adjacent to kitchen
- Adjacent to table/chair storage
- Adjacent to amphitheater
- Adjacent to covered lunch area
- Adjacent to music
- Easy community access
- Easy access for deliveries

F. Furniture & Equipment

- All furniture should be moveable [not fixed].
- Tables: approx. 50 tables for ten or 40 tables for 12 [tables could be round or rectangular but should be on rollers]
- Chairs: approx. 500
- Rack equipment for tables and chairs

G. Electrical/Technology

- 1 video port near stage
- 1 voice port/phone
- 1 data port near stage
- Outlet adjacent to data port
- Electrical outlets on each wall
- Technology system for this area will need to be configured
    - Sound system [location, drops, controls]
    - Video projection system [screen, control, etc.]
    - Floor conduit
    - Additional electrical

VII. 1. Large Group Area

H. Floors

- Consider alternatives to address multiple functions of area that is durable, easy to clean, acoustically appropriate, and able to meet the needs of activities identified.

I. Windows

- Will be required for ventilation purposes.
- Will require darkening capability.

J. Ceilings

- Height and type of ceiling to be determined by design

K. Walls

- Durable and acoustically appropriate

L. Lighting

- Multiple lighting systems will be required
    - Lighting for meetings and dining
    - Lighting for performances
- Adjustable lighting

M. Other Special Needs

- See notations above

VII. 2. Stage

A. Description

The stage is to be used in conjunction with the large group area as well as the outdoor amphitheater. Suggestions have been made to use a stage with a moveable front and rear wall in order that it might be used both ways. There are likely to be other suggestions as this area is designed.

The stage should have some fly space for changes in curtains, scenery, and other typical stage functions.

B. Capacity

- To support large group area and amphitheater
- Possibly used by a class for dance instruction

C. Activities

- Plays
- Musicals
- Dance
- Presentations
- Possibly as additional eating area

D. Space Requirements

- Stage [1,300 sq. ft.]
- Stage storage [200 sq. ft.]

E. Spatial Relationships

- Between large group area and amphitheater
- Near music room
- Access to stage for deliveries

F. Furniture & Equipment

- Curtains
- Lectern
- Risers [could be moveable from music room]

G. Electrical/Technology

- Video port[s]
- Voice port[s]
- Data port
- Electrical outlets
- Technology system for this area will need to be configured
    - Sound system [location, drops, controls]
    - Video projection system [screen, control, etc.]
    - Floor conduit
    - Additional electrical

H. Floors

- Wood or other flooring compatible with stage activities.

I. Windows

- None.

J. Ceilings

- Height and type of ceiling to be determined by design.

K. Walls

- Acoustically appropriate.

L. Lighting

- Multiple lighting systems will be required for performances.
- Adjustable lighting.

M. Other Special Needs

- Handicapped accessible.
- See notations above.

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VII. 3. Amphitheater

A. Description

The amphitheater is an outdoor performance area. This area may be a natural amphitheater built into a natural, existing slope or developed through the landscaping of the site. The amphitheater could be a tiered area out of concrete. The amphitheater should be a pleasant atmosphere that can be used as an informal gathering place as well as a performance area.

B. Capacity

- 500 persons

C. Activities

- Outdoor performances.
- Assemblies.
- Community meetings and events.

D. Space Requirements

- Approximately 5,000 sq. ft. of outdoor space.

E. Spatial Relationships

- Adjacent to stage/large group area
- Easy access for community use

F. Furniture & Equipment

- Tiered concrete for seating.

G. Electrical/Technology

- Outdoor electrical outlets
- Outlets for sound and video access.

VII. 3. Amphitheater

H. Floors

- Concrete or other suitable material.

I. Windows

- Not applicable.

J. Ceilings

- Consider net meshing over amphitheater or canopy.

K. Walls

- Not applicable.

L. Lighting

- Lighting suitable for evening performances.

M. Other Special Needs

- Handicapped accessible.
- Orientation to the sun, prevailing breezes.
- Area easy to maintain.
- Appropriate drainage.

VII. 4. Covered Eating Area

A. Description

The covered eating area is primarily an outdoor lunch area. This area might also be used for community picnics and some outdoor classroom activities.

B. Capacity

- 500 persons

C. Activities

- Outdoor lunch area

D. Space Requirements

- Approximately 4,000 sq. ft. [since this is covered area the square footage for building purposes would be 33% or 1320 sq. ft.]

E. Spatial Relationships

- Adjacent to kitchen serving area
- Adjacent to stage/large group area [suggest large moveable door between large group area and covered eating area]
- Not too far from the three academic houses.

F. Furniture & Equipment

- Picnic tables or comparable furniture
- Trash and recycling containers
- Possibly an outdoor barbecue area for cooking.

G. Electrical/Technology

- Outdoor electrical outlets
- PA speaker

VII. 4. Covered Eating Area

H. Floors

- Concrete or comparable surface.

I. Windows

- Not applicable.

J. Ceilings

- To be determined by design.

K. Walls

- Not applicable.

L. Lighting

- Lighting suitable for evening use.

M. Other Special Needs

- Area easy to maintain.
- Appropriate drainage.

VII. 5. Storage

A. Description

This area will store tables and chairs that are used in the large group area.

B. Capacity

- Not applicable.

C. Activities

- Storing approx. 500 chairs and 40-50 tables.

D. Space Requirements

- Approx. 500 sq. ft.

E. Spatial Relationships

- Adjacent to large group area.

F. Furniture & Equipment

- Tables and chairs.

G. Electrical/Technology

- 2-3 electrical outlets.

H. Floors

- Vinyl tile or suitable alternative.

I. Windows

- None.

J. Ceilings

- No special instructions.

K. Walls

- No special instructions.

L. Lighting

- No special instructions.

M. Other Special Needs

- Large doors.

VII. 6. Kitchen

A. Description

The kitchen for the middle school will include food preparation rather than serve as a satellite kitchen. Food service will include multi-ethnic, fast foods, and more traditional offerings. It is proposed that food service will include students in the planning of menus, preparation, and service. There is also proposed to be a bridge between food service and the school's wellness program.

Food service requires fast preparation and serving since students have a limited time to eat lunch. It is anticipated that the school will have a minimum of three lunch periods, preferably one for each house of 500 students. This can be altered by having additional lunch periods if required. A high percentage [over 75%] of the students will be eligible for free or reduced lunch.

B. Capacity

- Food preparation for 1,500 students.
- Potential food preparation for students at other sites.

C. Activities

- Preparation of food for meals.
- Serving meals.
- Cleaning after meals.

D. Space Requirements

- Kitchen [2,100 sq. ft.]
- Storage [250 sq. ft.]
- Restroom [50 sq. ft.]
- Office [100 sq. ft.]

E. Spatial Relationships

- Adjacent to large group [cafeteria].
- Adjacent to outdoor eating area.
- Adjacent to staff dining.
- Adjacent to custodial area to facilitate deliveries, cleaning, etc.
- Easy access to and from houses.
- Access for district delivery vehicles.

VII. 6. Kitchen

E. Spatial Relationships

- Reasonable proximity to building administration.

F. Furniture & Equipment

Item	Quantity	Electrical/Gas	Dimensions	Remarks
Refrigerator - 3 section	1	115/60/1 [1120 watts]	84"W X 36"D X 84"H	Duplex
Freezer - 3 section	1	208/60/1		Hardwire
Freezer - 2 section	1	208/60/1	55"W X 36"D X 84"H	Hardwire
Milkshake Machine	1	208/230/60/3 33 amps	26"W X 33"D X 57¼"H	2 separate circuits, 16.5 each [L-15 20 amp]
Ice Cream Cabinet	1	115/60/1 [3 amps]	32¼"W X 21"D X 33"H	
Freezer - 1 section	1	115/60/1 [813 watts]	28"W X 36"D X 84"H	Duplex
Gas Deep Fat Fryer	1 Bank	115/60/1 [39 amps]		Electrical for controls, 3 separate 115 outlets, 120m BTU
Gas Convection Oven	2	115/60/1 11KW per section	38"W X 37"D X 66"H	2 separate 115 outlets 110m BTU
Hot Cabinet	2	115/60/1 [1470 watts]	28"W X 34"D X 55"H	Separate outlet
Bun Rack [7]	1		27"W X 36"D	
Rack [11]	3		48"W X 18"D	
Rack [13]	2		42"W X 24"D	
Rack Bun Pan	2			
Rack/Display/Counter	10			
Rack/Dunnage/Storeroom	4			
Refrigerator	5			Undercounter, 6 c.f.
Wrapping Machine	1			Type A tray only
Table, Mixer	1			
Rack, Storerm/pots, pans	5			
Table, Chef	2		60 X 30 X 34 s.s. top	
Table, Mixer	2		30 X 30	
Cart, Utility	4			
Cash Register, Electronic	2			
Cooler, Milk/beverage	2			Stainless steel
Counter, Coin	1			
Desk	1			
Chair	1			4 hole
Cabinet, file, 2-door, lock	1			3 section, with left or right side filter

VII. 6. Kitchen

F. Furniture & Equipment

Item	Quantity	Electrical/Gas	Dimensions	Remarks
Oven, convection	2			Rack type, Blodgett or equal
Rack, food transport	10			
Range, natural gas	1			4 burner, open top w/oven
Refrigerator	3			46 c.f.
Steam table, gas or electric	1			
Table, chef's	4		30" X 72"	
Transport cabinet	5			Portable, electric, hot food transport unit
Transport cabinet	5			Portable, electric, cold food transport unit
Normally in Contract				
Sink - 2 compartment	1			
Dishwasher/counters	1			
Hood for dishwasher	1			
Hood for cooking equip.	1			
Lockers	12			
Hand Sink	1			
Coat hanger, overhead shelf	1			
Wall, protection guards	1 lot			
Security blinds for windows	1 lot			
Fly fans	1 lot			
Paper towel holders	2			
Soap dispenser	1			
Bathroom mirror	1			
Serving counters	1 lot			
Fire Suppressant System	1			

- Whiteboard:
    - Washable bulletin board in kitchen and on serving line [size and placement determined after facilities design]
- Tackboard:
    - Tackboard and strips for messages/announcements/ menus/etc. [size and placement determined after facilities design]

G. Electrical/Technology

- 1 voice ports/phone
- 1 data ports near computer work stations
- Quad outlets adjacent to data ports

VII. 6. Kitchen

G. Electrical/Technology [cont'd]

- Electrical outlets for other equipment [refrigerator, stoves, ovens, and other food preparation devices. Special electrical will be required for above average loads, commercial voltage].
- 1 clock.
- PA "all call" speaker.

H. Floors

- Vinyl tile.

I. Windows

- Operable permitting cross ventilation.
- Secure against intrusion but provide natural lighting.

J. Ceilings

- To be determined by design.

K. Walls

- Easy to clean.

L. Lighting

- Fluorescent fixtures.

M. Other Special Needs

- Exterior door opening of kitchen to be a minimum of 42 inches width clear and standard height.
- Servicing counter heights to be level appropriate to middle school student use.
- Servicing windows to outdoor eating area and to large group room.
- Loading dock for deliveries.

VII. 7. Custodial Work Area

A. Description

This is area will serve to store custodial supplies and equipment, make on-site repairs, receive school deliveries, and support the custodial functions of the school. In addition, there should be custodial closets strategically located throughout the school to facilitate building cleaning functions.

B. Capacity

- Not applicable.

C. Activities

- Storing custodial supplies and equipment
- On-site repairs
- School deliveries
- Custodial staff breaks
- Completing administrative paperwork

D. Space Requirements

- Custodial work area
- This area is to be configured for bulk storage, supply storage, work bench, and custodial breaks.

E. Spatial Relationships

- Adjacent to kitchen
- Access for deliveries

F. Furniture & Equipment

- Cabinetry
  - Wardrobe closet [cabinets above & below]
    height: approx. 7'
    depth: approx. 30"
    width: approx. 4'

VII. 7. Custodial Work Area

F. Furniture & Equipment [cont'd]

- Cabinetry [cont'd]
  - Paper/supply storage
    height: approx. 7'
    depth: approx. 14"
    width: approx. 4'

- Table with 6 chairs
- Desk and chair
- 4' X 4' tackboard near desk
- Maximum amount of adjustable shelves [18" deep, 30" above floor, 30" between shelving units]
- Shelving appropriate for bulk items, large boxes, equipment, etc.
- Service sink with hot and cold water
- Work bench area with 4' X 5' tool board above
- Restroom with one water closet, one lavatory, and mirror over lavatory [18" X 12"], and one paper and powered soap dispenser on wall.

G. Electrical/Technology

- One data port/computer
- One voice port/phone
- PA "all call" speaker"
- Quad outlet for computer
- Electrical outlet at workbench
- Additional outlets for power tools

H. Floors

- Vinyl tile or suitable alternate [concrete]

I. Windows

- Operable, secure

J. Ceilings

- No special requirements

VII. 7. Custodial Work Area

K. Walls

- No special requirements.

L. Lighting

- Flush or surface mounted light fixtures.

M. Other Special Needs

- Access to loading dock for deliveries.

VII. 8. Staff Dining Area

A. Description

It is anticipated that the dining area will not only be used during the lunch hour but also for informal breaks and/or meetings during the remaining of the day.

B. Capacity

- 30-40 staff for lunch [three lunch periods]
- 30-40 staff for meetings

C. Activities

- Staff dining
- Staff breaks
- Meetings [possibly for staff, students, and/or community]

D. Space Requirements

- Approximately 1,000 sq. ft.

E. Spatial Relationships

- Adjacent kitchen serving area
- Adjacent to large group area
- Not too distant from the three academic houses.
- Not too distant from building administration.

F. Furniture & Equipment

- 4-6 round tables with 6-8 chairs
- Possibly vending machines
- Whiteboard: Approx. 4' X 16'
- Tackboard and strips for messages, announcements, etc. [size and placement not critical].

G. Electrical/Technology

- Electrical outlets - perimeter of room

VII. 8. Staff Dining Area

G. Electrical/Technology [cont'd]

- PA speaker
- 1 video port/monitor
- 1 voice port/phone

H. Floors

- Vinyl tile [possibly consider carpet if district policy changes]

I. Windows

- Operable windows to allow for ventilation.
- Blinds with darkening capability.

J. Ceilings

- Acoustical tile.

K. Walls

- Acoustically suitable to function.

L. Lighting

- Fluorescent lighting.

M. Other Special Needs

- Two doors: one to exterior, one to large group area.

VIII. Circulation/Restrooms/Mechanical/Canopies

A. Description

The design of the facility will need to address interior circulation, mechanical and electrical areas, restrooms, and canopies for outdoor circulation areas. Approximately 15% of the net programmable area has been set aside for these spaces. Wall space will need to be either taken out of this area or in some cases will need to be included in the "net programmable area."

B. Restrooms

	Water Closets		Urinals	Lavatories	Drinking Fountains
Staff Use	Male 1 per 40	Female 1 per 40	Male 1 per 50	1 per 40	
Student Use	Male 1 per 30	Female 1 per 25	Male 1 per 75	1 per 40	1 per 75

A middle school for 1,500 students should have restrooms to accommodate 1,800, if the school is expanded. It should be noted that since the "inclusionary" method of delivery of special education is to be employed, all restrooms should be handicapped accessible.

The following restroom locations are recommended:

- Staff Restrooms:
    - 2 in each House Support Area [6 total, 1-2 water closets/urinals and lavatories in each].
    - 2 in the Building Administration Area [1-2 water closets/urinals and lavatories in each]
    - 2 in Physical Education Complex [adjacent to offices with 1 water closet and lavatory in each].
    - 2 in Library/Media Center [1 water closet and lavatory in each].
    - 2 in Kitchen/Custodial Work Area [1 water closet and lavatory in each].

B. Restrooms [cont'd]

- Student Restrooms:
    - A minimum of 2 in each house for 500 students with close proximity to classrooms. Smaller restrooms may be achieved by including two restrooms in each cluster or locating restrooms between clusters.
    - 2 in Large Group Area/Covered Lunch Area/Outdoor Amphitheater to serve approximately 500 students.
    - 2 in Health Clinic/Building Administration [1-2 water closets and lavatories in each].
    - 2 adjacent to Locker Rooms [200 students to be served by each locker room].

C. Drinking Fountains

Most sinks in the classrooms should have a drinking fountain included to reduce student movement in and out of classrooms. In addition, drinking fountains should be located:

- In each House near classroom/circulation area.
- Near Building Administration area.
- Near Physical Education Complex.
- Near Library/Media Center.
- Near Large Group Area.
- Near Covered Lunch Area & Outdoor Amphitheater.

D. Canopies

It is suggested that canopies be included in the following areas:

- Covered lunch area [included in program].
- Covered exterior circulation.
- Outdoor patios [if budget permits].
- Outdoor amphitheater [if budget permits].

Since the classroom areas are likely to be multi-story, the second-story patio for the classroom clusters might be used as shelter for the first-story patio areas.

E. Electrical & Mechanical

Electrical closets will need to be strategically located throughout the building. The building will also require locations for technology networking. This effort should be coordinated with the district technology personnel.

Mechanical areas may include special areas designated for this purpose, roof top units, or other configurations, which will need to be determined by design.

F. Custodial Closets

Custodial closets should be strategically located throughout the building. It is suggested that a custodial closet be located in each house at a minimum and possibly in conjunction with each cluster as well as located in close proximity with high traffic areas of the building. Custodial closets should include a mop sink, adequate drainage, and storage for custodial supplies.

IX. Outdoor Site

A. Overall Description

Throughout the planning process, many ideas surfaced regarding the use of outdoor space. Not all ideas will be incorporated since the total site is limited to 13 acres. Many of the concepts listed here will need to be addressed during the charette and site design process. The district's "Landscape Design & Site Development Guidelines" [1991] should be reviewed in conjunction with this section.

Two blocks to the north of the site for the new Hoover/Crawford Area Middle School is the site for the new Hoover/Crawford Area Elementary School and an expanded park project that will be adjacent to the new elementary school. Since there is to be a new elementary school, new middle school and expanded park in the same geographical area, the needs of all three should be taken into consideration regarding the appropriate uses of each site in meeting the educational and recreational needs of the community.

Interest has also been expressed in using the new schools and expanded park as a catalyst for community re-development in the City Heights area. One idea that was expressed was to develop a linear park between the elementary park/school site and the middle school by possibly closing off a street and redirecting traffic. This concept is beyond the scope of the project but provides an insight into what some community members envision these new projects to provide.

C. Activities in this Area

- Pedestrian access.
- Vehicular access.
- Physical education activities [track, play fields].
- Student lunch.
- Outdoor assemblies.
- Outdoor learning activities.
- Student drop-off.
- Bus drop-off.
- Vehicular parking.
- Bicycle parking.
- Deliveries.

IX. Outdoor Site

D. Summary of Spaces to be Provided in This Area

- A number of outdoor extended learning areas or "patios." The extended learning areas may be used for art, science, and other student projects. The extent to which this concept can be employed will depend on design, cost, and site. [See cluster description.]
- An exterior space to be used primarily for a student lunch area. It should be located in close proximity to the multi-purpose area and kitchen. [See covered eating area description.]
- The amphitheater is projected to be an outdoor assembly area. Solar orientation should be taken into consideration to determine its appropriate location. [See amphitheater description.]
- A garden is planned to be used for both instructional and community purposes.

D. Summary of Spaces to be Provided [cont'd]

- Play fields with grass area for soccer, baseball/softball and field activities as well as a running track will be limited by site size. A soccer field is approximately 2 acres and a baseball/softball field about 1.5 acres. The actual locations, number of activities areas and equipment will need to be addressed through the design process.

  Fencing around the play fields will need to be addressed. Concern has been expressed regarding safety and security versus aesthetics and community access. Safety dictates that barriers exist to ensure that play areas do not conflict with traffic and neighboring property owners. From a security perspective, there is a need to control access to the site, especially during school hours. Aesthetically, chain-link fences are perceived as undesirable and may discourage community use. The play fields should be available for community use, especially during non-school hours.

- Hard court areas for basketball and racquetball are needed. There should be a clear separation between the hard court areas and play fields to foster separate teaching stations. These courts should be available for community use, especially during non-school hours.

E. General Description of Area

- As a result of overall square foot project limitations and the district policy of no [or limited] air-conditioning, it is projected that the school itself will be composed of a series of buildings. Most circulation between areas will not be through interior corridors but through exterior circulation patterns. It is also projected that as a result of site limitations, the building[s] would need to be multi-story. Even with multi-story building[s], the building mass and circulation space will require a substantial portion of the site.

- Since the building[s] is not to be air-conditioned, orientation of the facility to site should maximize exposure to prevailing breezes and natural ventilation with appropriate solar orientation to minimize uncomfortable environmental conditions.

F. Relationship to Other Areas

- The administrative area should have easy access from visitor parking and pedestrian traffic flow, providing an inviting atmosphere and enhancing communication and control.
- The academic clusters should be located with easy access to the student drop-off area and pedestrian entry to the building.
- The library/media center, the hub of the academic areas, requires easy after-school access near parking and off-street pedestrian entry for community use. There should also be delivery access to the library/media center. It should also be noted that future expansion of the library for public use is possible.
- The multi-purpose area should be located in close proximity to classroom areas for student access and near parking and off-street pedestrian entry for community use.
- The kitchen and custodial area should have easy access to the street for deliveries and trash removal.
- For safety purposes, there should be a separation of vehicular and pedestrian access to the site. To the extent possible, the following should be separate:
    - Bus drop-off area.
    - Student/pedestrian access.
    - Bicycle parking area.
    - Staff parking area.
    - Visitor parking area.
    - Service drive for deliveries.

In addition, the pedestrian and bicycle access to the site needs to reviewed from the view point of public safety [street crossings].

IX. Outdoor Site

K. Special Considerations

- Lighting: Since the school will be used in the evenings for community and student activities, lighting is required in the parking lots and outdoor pedestrian areas. Lighting systems should be configured to provide ample light and avoid blind spots. Light poles, fixtures, and systems should be durable with light sensors and timers to conserve energy and regulate use.

- Security: Overall security of the site is of utmost importance. Creative design solutions will be needed regarding aesthetics and community access. Security affects the types of landscaping, location of vehicular and pedestrian access, lighting, fencing, and building layout.

  Protecting the building against intrusion is the primary concern. A balance of permitting access to the grounds and securing the building during non-programmed hours while maintaining overall aesthetics needs to be obtained. In recent school facility projects the San Diego Unified School District has used decorative fencing to deter access to the building while minimizing fencing that appears to be intrusive around the parameter of the site.

- Landscaping: The landscaping of the site needs to meet the challenge of being aesthetically pleasing and requiring low maintenance. Community members expressed a strong interest in green spaces with trees, shrubs, flowers, and possibly garden and pond areas.

  As a result of operating budget constraints, custodial and maintenance staff have expressed landscaping to be easy to maintain and inexpensive. See "Landscape Design and Site Development Guidelines" for additional information on types of landscaping.

- Future Expansion: There are several areas identified that should be master-planned in the site, including expanded student capacity and potential future community uses.

  District guidelines require the building to be expandable by 40 percent. No guideline determines whether the future expansion should consist of permanent construction or portable units. However, experience indicates that expansion would likely include portable units.

K. Special Considerations [cont'd]

- Future Expansion [cont'd]: The district is involved in extensive discussion regarding a new form of modular or portable construction that msy permit clustering of portables, multi-story, and portables to be added to existing clusters of classrooms. The site master plan needs to address expansion in order for a sensible solution to be identified prior to school construction.

  Possible future expansion may also include joint use of the library/media center as a public library, collaboration with other agencies for health and community services, and expanded services of daycare and pre-school programs.

- Parking: District guidelines for parking are based on 3 spaces for each instructional area [classroom] with 1/2 of spaces for full-size automobiles and 1/2 for compact cars. Required parking based on this formula would equal 171 spaces.

  In addition, the following chart indicates the required number of handicap accessible spaces according to district guidelines:

Parking Spaces	Handicapped Spaces
1-25	1
26-50	2
51-75	3
76-100	4
101-150	5
151-200	6
201-300	7

Parking is further complicated by community meetings and events scheduled at the school and may need to be addressed through off-street and on-street parking arrangements.

G. Appendix

A. Technology Configurations

Many questions surface regarding technology on new facility projects. This appendix is not to be interpreted as a technology specification for the project but as a suggestion on how technology systems can be configured.

In the design of the facility, two issues will need to be addressed:

- Building Infrastructure
  - Cable trays
  - Conduit
  - Voice/video/data ports
  - Electrical

- Technology System
  - Wiring
  - Head-end equipment
  - Loose equipment [monitors, computers, phones, etc.]

It is recommended that the infrastructure requirements be addressed in the basic building design.

Since the building will not be completed for another three years, it is recommended that the technology specifications and bid package not be released until nine months before occupancy. This will allow the district to take advantage of the latest technological innovations.

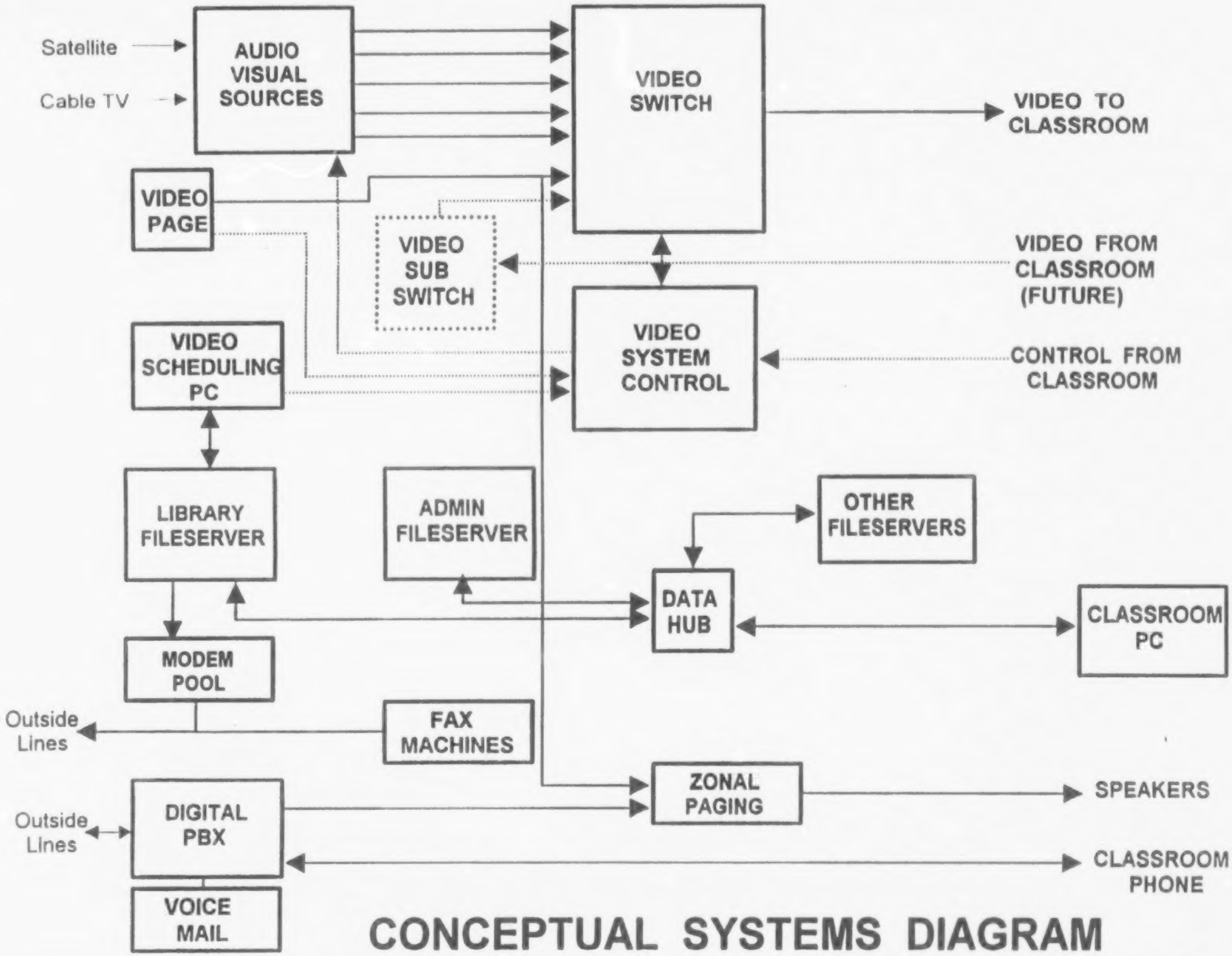
The district will be consulted for building infrastructure requirements. The following diagrams provide samples of voice, video, and data drops and technological configurations.

The *Infrastructure* is the network on which the primary systems of voice, video, and data are distributed in the education environment. Infrastructure should consist of a wide-area-network for voice and data communications between all schools and the administrative services center. Within the school, the infrastructure should include cable trays and/or conduit channel for the cabling.

The *Voice System* is likely to be some form of a PBX [Private Branch Exchange] phone system. All instructional areas and offices should have phones. It is anticipated that there will be computers for instructional and administrative use as well as multiple file servers and a building network for data purposes.

The *Video Information System* may consist of a centralized video distribution system. All of the audio/visual sources could be centralized in the media retrieval room or head-end room but individually delivered to and controlled from any instructional area. It is anticipated that each instructional area will have a video display and control interface.

The following diagram is a representation of the primary technology systems of voice, video, and data. [This is an example only. The district should be consulted for final technology specifications.]


Satellite
Cable TV
AUDIO VISUAL SOURCES
VIDEO SWITCH
VIDEO TO CLASSROOM
VIDEO PAGE
VIDEO SUB SWITCH
VIDEO FROM CLASSROOM (FUTURE)
VIDEO SYSTEM CONTROL
CONTROL FROM CLASSROOM
VIDEO SCHEDULING PC
LIBRARY FILESERVER
ADMIN FILESERVER
OTHER FILESERVERS
DATA HUB
CLASSROOM PC
MODEM POOL
Outside Lines
FAX MACHINES
ZONAL PAGING
SPEAKERS
Outside Lines
DIGITAL PBX
CLASSROOM PHONE
VOICE MAIL

CONCEPTUAL SYSTEMS DIAGRAM

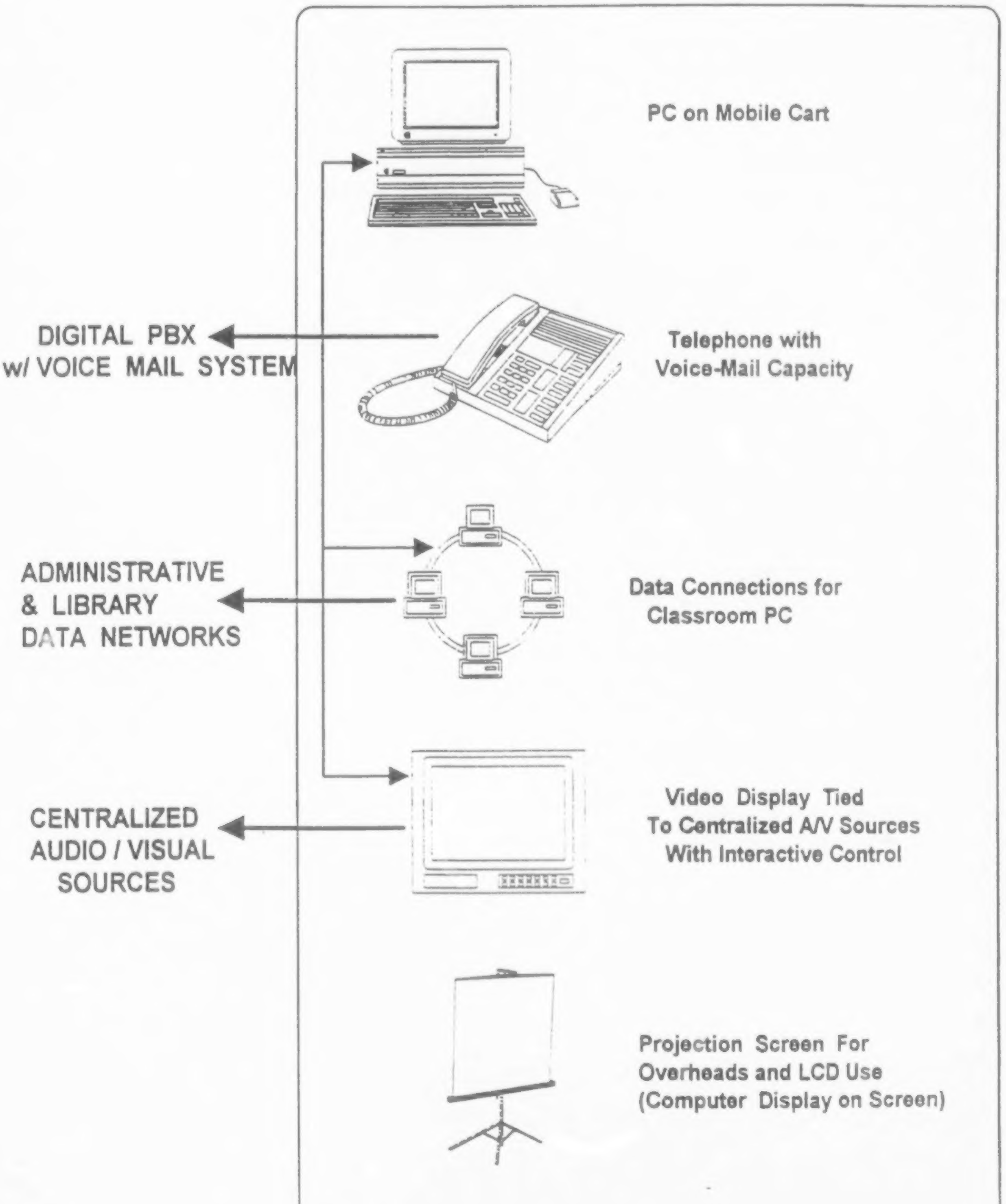
Typical Classroom Framework

The items listed below represent a "typical" configuration for the instructional spaces located in the building.

- Personal Computer & Printer: It is anticipated that the instructional areas will have computers and printers for use by both the teacher and students. Eventually, there will be approximately four to six computers per classroom.
- Telephone: It is anticipated that the instructional areas will be provided with a telephone. These phones will be connected to a PBX and a voice-mail system.
- Video Display & Interface: It is anticipated that each instructional space will be provided with a color display which is connected to the centralized audio/visual sources.
- Computer Space: It is anticipated that each classroom will be provided with space for using computers.
- Raceway on One Wall: Each classroom will be provided with a raceway for AC power and data connections. Lab classrooms will have raceways and/or floor conduit throughout the room.

The following diagrams represent a typical configuration.

TYPICAL CLASSROOM FRAMEWORK



PC on Mobile Cart

DIGITAL PBX
w/ VOICE MAIL SYSTEM

Telephone with
Voice-Mail Capacity

ADMINISTRATIVE
& LIBRARY
DATA NETWORKS

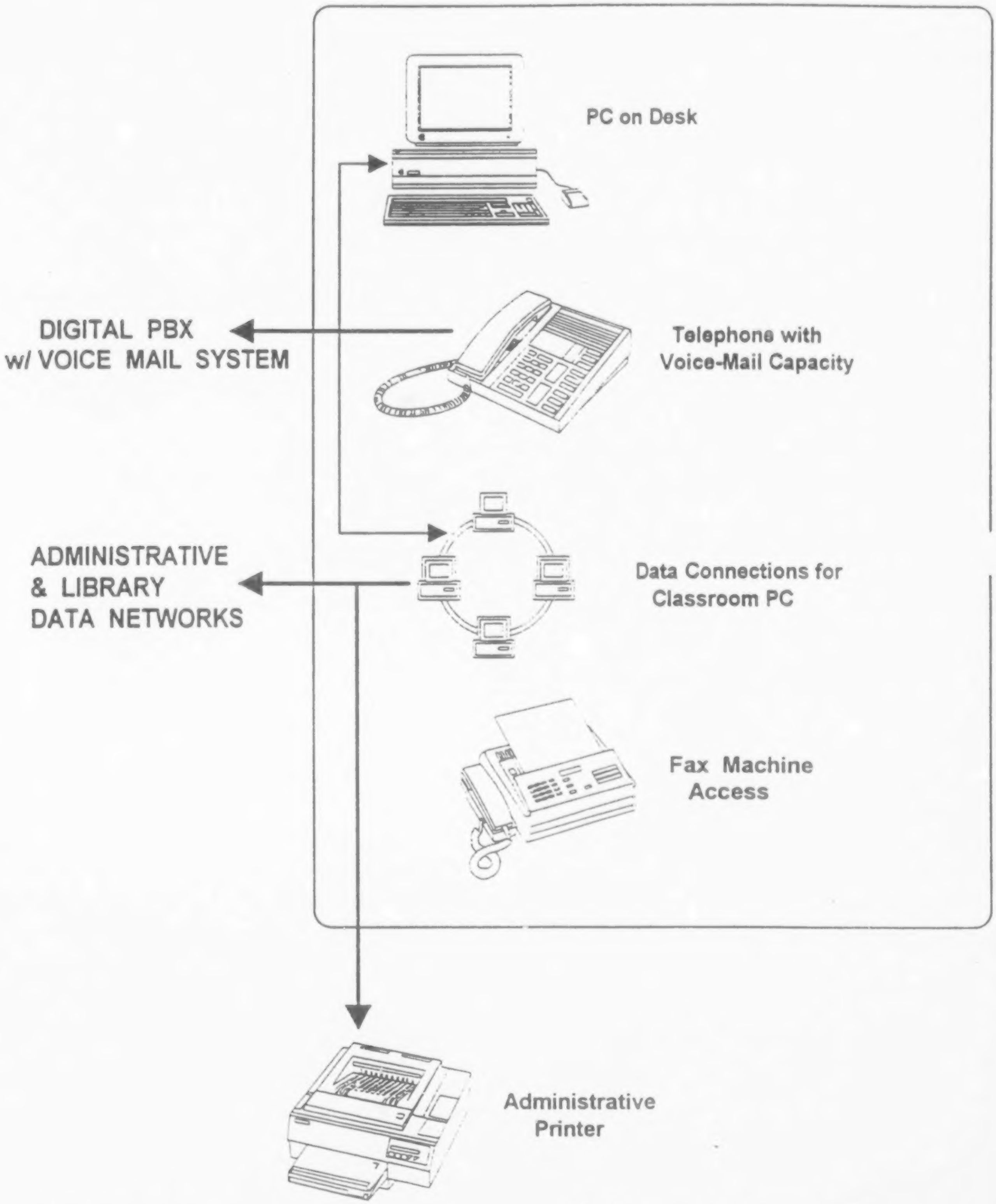
Data Connections for
Classroom PC

CENTRALIZED
AUDIO / VISUAL
SOURCES

Video Display Tied
To Centralized A/V Sources
With Interactive Control

Projection Screen For
Overheads and LCD Use
(Computer Display on Screen)

TYPICAL OFFICE FRAMEWORK



PC on Desk

DIGITAL PBX
w/ VOICE MAIL SYSTEM

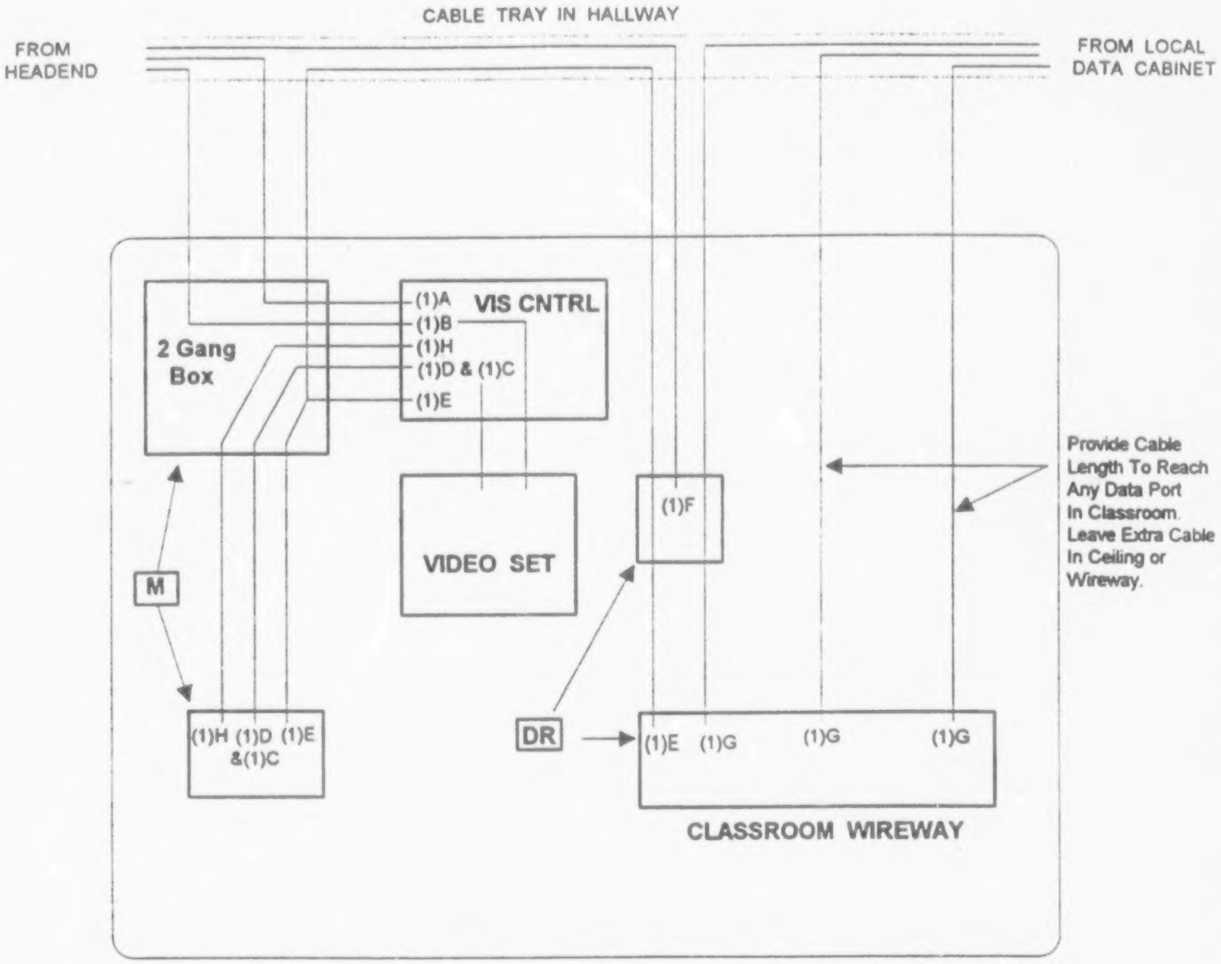
Telephone with
Voice-Mail Capacity

ADMINISTRATIVE
& LIBRARY
DATA NETWORKS

Data Connections for
Classroom PC

Fax Machine
Access

Administrative
Printer


CABLE TRAY IN HALLWAY
FROM HEADEND
FROM LOCAL DATA CABINET
2 Gang Box
VIS CNTRL
(1)A
(1)B
(1)H
(1)D & (1)C
(1)E
VIDEO SET
(1)F
M
(1)H (1)D (1)E
&(1)C
DR
(1)E (1)G
(1)G
(1)G
CLASSROOM WIREWAY

Provide Cable Length To Reach Any Data Port In Classroom. Leave Extra Cable In Ceiling or Wireway.

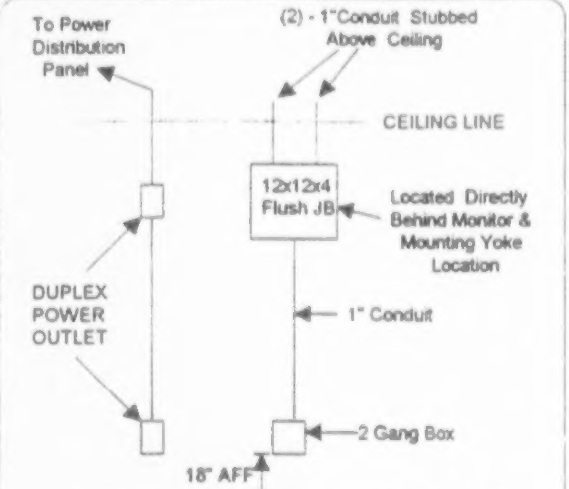
CLASSROOM CABLING REQUIREMENTS - CONCEPTUAL

(Actual Cabling Requirements May Vary Based Upon Manufacturers Control Scheme)
(Provide Functional Equivalent As a Minimum Requirement)

CABLE TYPES

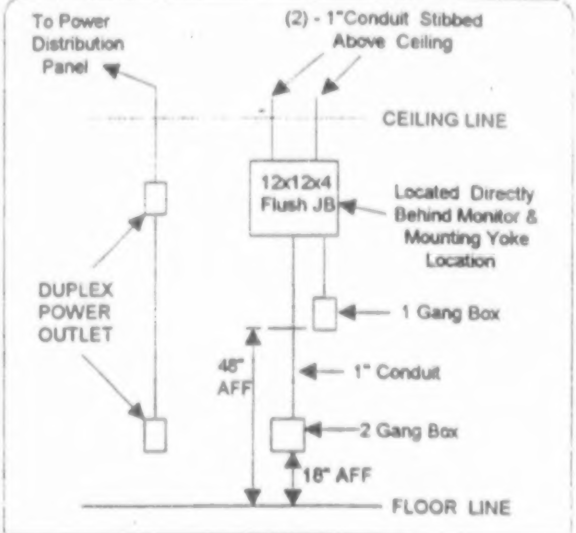
A - Four Strand Fiber Optic Cable
B - UTP - (1 Pair) 22 Awg Stranded
C - STP - (1 Pair) 22Awg Stranded
D - RG-59 Coax
E - STP - (Computer Serial Interface)
F - Level One STP
G - Level Five STP
H - Fiber Optic Jumper Cable

UTP = Unsheilded Twisted Pair
STP = Sheilded Twisted Pair
* All cable is Plenum rated


To Power Distribution Panel
(2) - 1"Conduit Stubbed Above Ceiling
CEILING LINE
12x12x4 Flush JB
Located Directly Behind Monitor & Mounting Yoke Location
DUPLEX POWER OUTLET
1" Conduit
2 Gang Box
18" AFF
FLOOR LINE

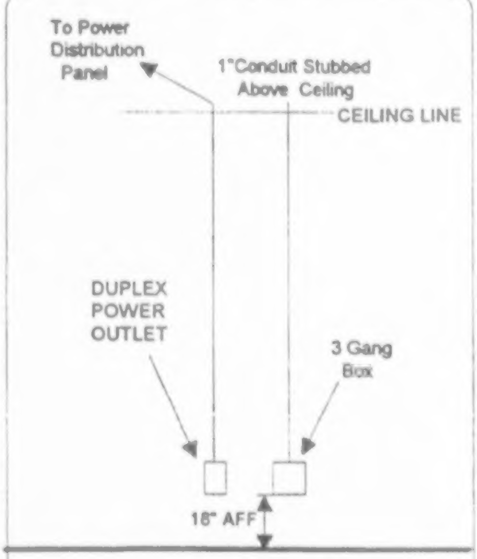
TYPICAL VIDEO LOCATION

Symbol **V1**


To Power Distribution Panel
(2) - 1"Conduit Stibbed Above Ceiling
CEILING LINE
12x12x4 Flush JB
Located Directly Behind Monitor & Mounting Yoke Location
DUPLEX POWER OUTLET
1 Gang Box
48" AFF
1" Conduit
2 Gang Box
18" AFF
FLOOR LINE

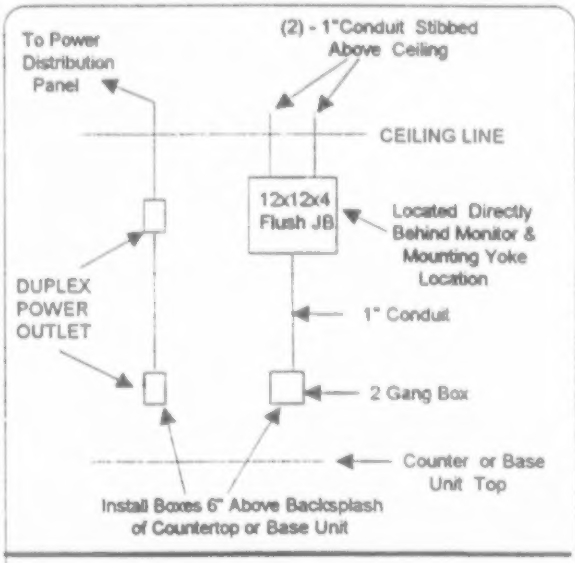
TYPICAL VIDEO LOCATION

Symbol **V2**


To Power Distribution Panel
1"Conduit Stubbed Above Ceiling
CEILING LINE
DUPLEX POWER OUTLET
3 Gang Box
18" AFF

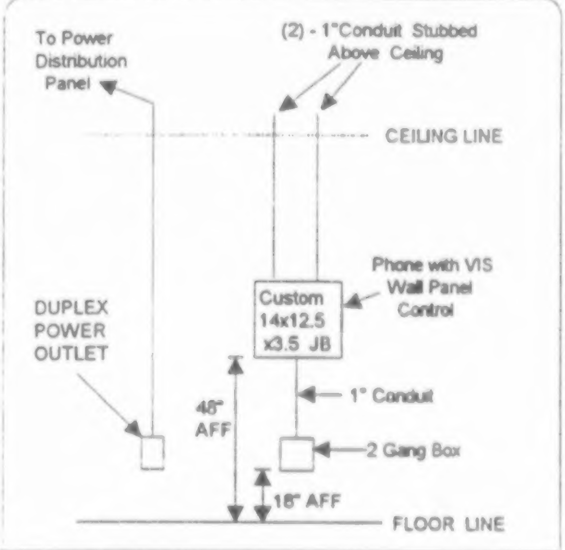
TYPICAL VIDEO PORT LOCATION

Symbol **VP**


To Power Distribution Panel
(2) - 1"Conduit Stibbed Above Ceiling
CEILING LINE
12x12x4 Flush JB
Located Directly Behind Monitor & Mounting Yoke Location
DUPLEX POWER OUTLET
1" Conduit
2 Gang Box
Counter or Base Unit Top
Install Boxes 6" Above Backsplash of Countertop or Base Unit

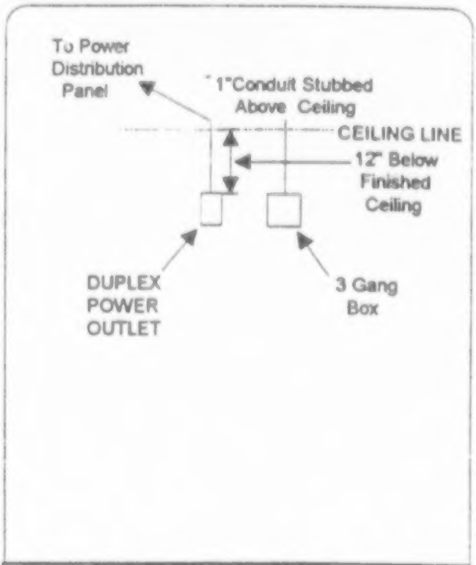
TYPICAL VIDEO LOCATION

Symbol **V3**


To Power Distribution Panel
(2) - 1"Conduit Stubbed Above Ceiling
CEILING LINE
Phone with VIS Wall Panel Control
Custom 14x12.5 x3.5 JB
DUPLEX POWER OUTLET
48" AFF
1" Conduit
2 Gang Box
18" AFF
FLOOR LINE

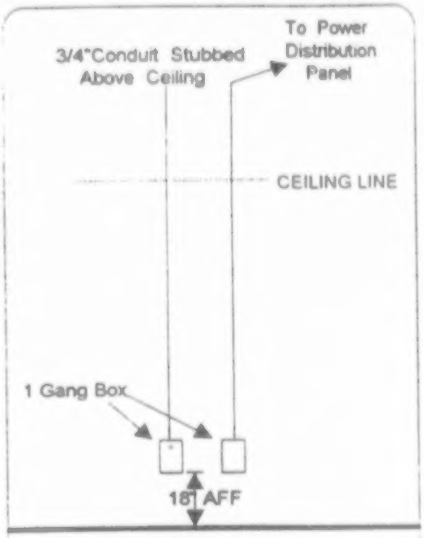
TYPICAL VIDEO LOCATION

Symbol **V4**


To Power Distribution Panel
1"Conduit Stubbed Above Ceiling
CEILING LINE
12" Below Finished Ceiling
DUPLEX POWER OUTLET
3 Gang Box

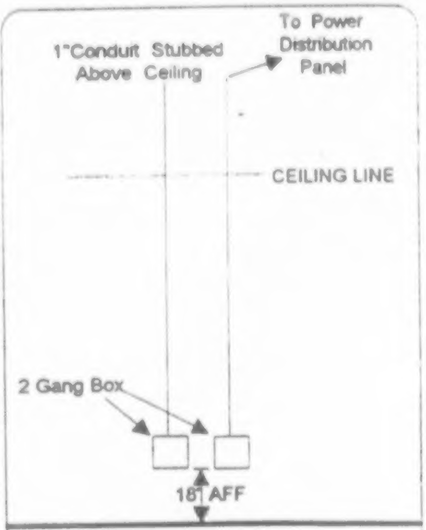
TYPICAL VIDEO DISPLAY LOCATION

Symbol **VD**


3/4"Conduit Stubbed Above Ceiling
To Power Distribution Panel
CEILING LINE
1 Gang Box
18" AFF

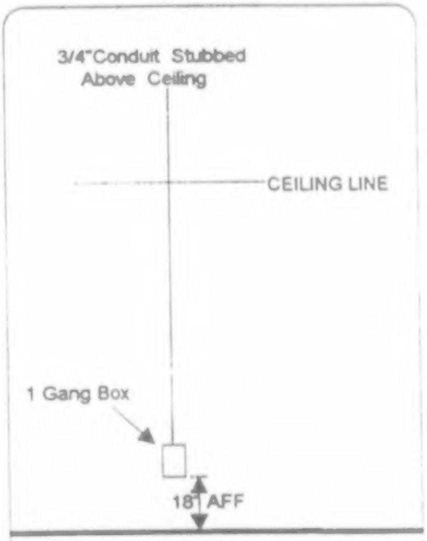
TYPICAL DATA TELEPHONE LOCATION

Symbol DT


1"Conduit Stubbed Above Ceiling
To Power Distribution Panel
CEILING LINE
2 Gang Box
18" AFF

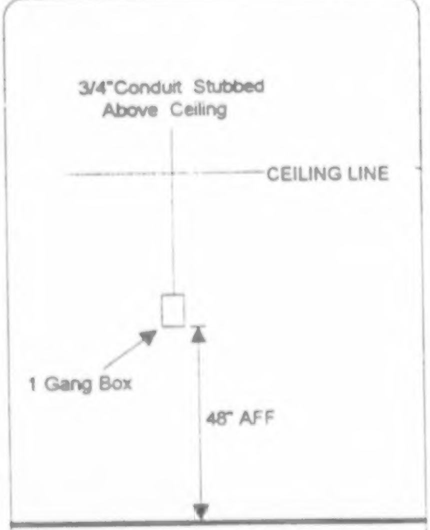
TYPICAL DATA LOCATION

Symbol D


3/4"Conduit Stubbed Above Ceiling
CEILING LINE
1 Gang Box
18" AFF

TYPICAL TELEPHONE LOCATION

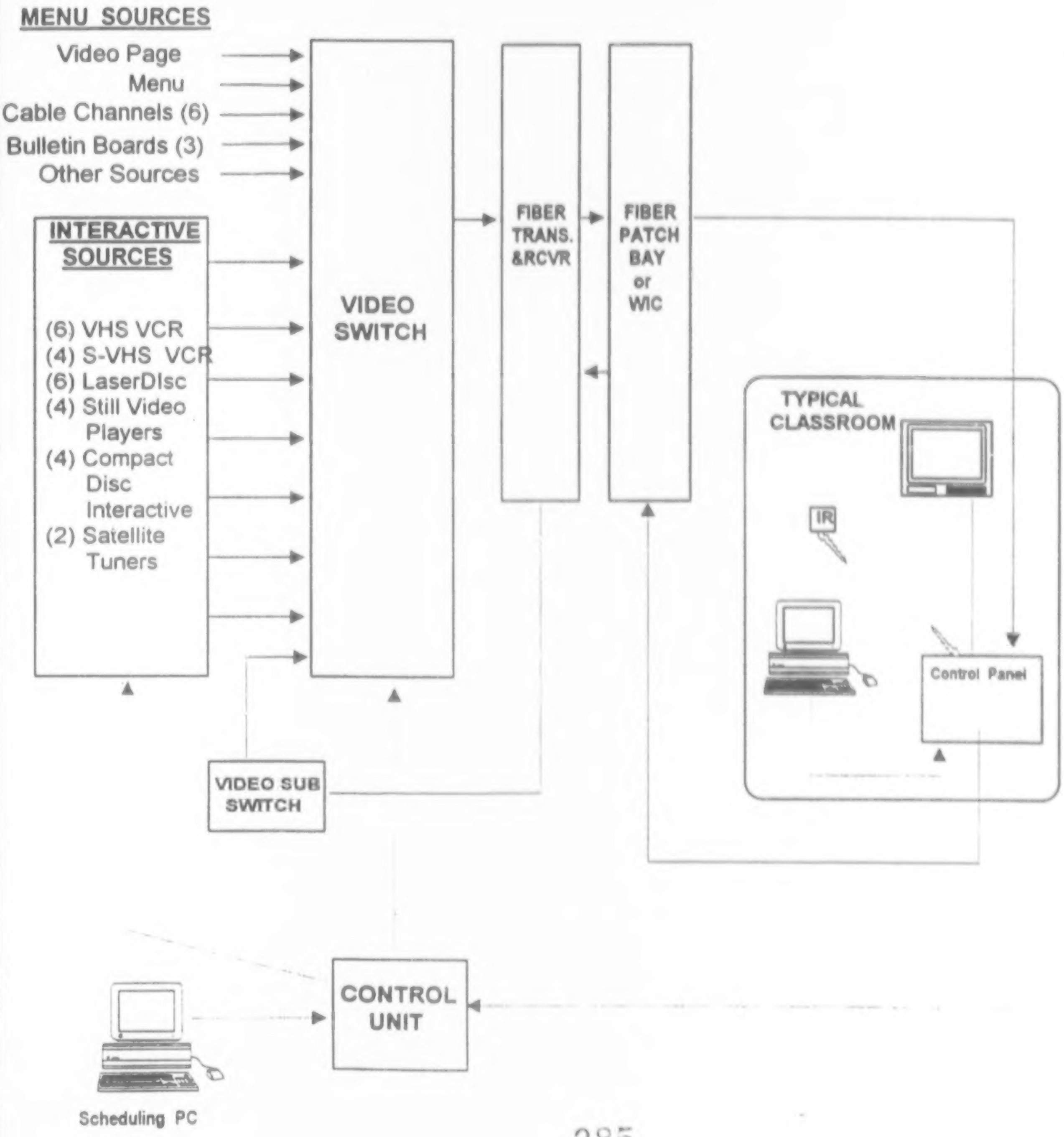
Symbol T


3/4"Conduit Stubbed Above Ceiling
CEILING LINE
1 Gang Box
48" AFF

TYPICAL WALL MOUNTED TELEPHONE LOCATION

Symbol TW

VIDEO INFORMATION SYSTEM - CONCEPTUAL DIAGRAM


MENU SOURCES
Video Page
Menu
Cable Channels (6)
Bulletin Boards (3)
Other Sources
INTERACTIVE SOURCES
(6) VHS VCR
(4) S-VHS VCR
(6) LaserDisc
(4) Still Video Players
(4) Compact Disc Interactive
(2) Satellite Tuners
VIDEO SWITCH
FIBER TRANS. &RCVR
FIBER PATCH BAY or WIC
TYPICAL CLASSROOM
IR
Control Panel
VIDEO SUB SWITCH
CONTROL UNIT
Scheduling PC